

Transportation Financing Issues in Louisville and Jefferson County

by
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High quality physical infrastructure is a necessary condition for economic prosperity. The private sector typically builds the homes, subdivisions, factories, offices, and wholesale and retail operations. The public sector is primarily responsible for roads, bridges, airports, local bus service, and parks. The quantity and quality of physical infrastructure is an important factor in the ongoing competition for firms and people.

Louisville competes at some level with every regional economy in the world, but most regularly and intensely with a set of peer metro areas. Perhaps the most intense competition is with Cincinnati, Indianapolis, Nashville and Memphis, though we have identified a group of ten other markets that regularly appear in the mix – Birmingham, Charlotte, Columbus, Dayton, Greenville, Jacksonville, Kansas City, Omaha, Raleigh, and Richmond. In some dimensions, particularly the competition for people and state-funded programs in the region, Louisville also competes with Lexington.

Louisville is faced with many critical transportation needs. Spaghetti Junction, where three interstate highways converge messily in a small spot downtown, is the most visible daily reminder of the need for major attention. Rush hour congestion gets worse each year. System gridlock is not uncommon, as a major accident— typically involving an overturned truck or a compound car crash – causes traffic backups on ramps and on to linked interstate highways. Many of the interstate interchanges, particularly those inside the Watterson Expressway, are poorly designed and have irrational approaches, short ramps, dangerous mergings, and are generally unsightly. Interstate 71 needs one or two more lanes between the Watterson and downtown. Many major street arteries, like Highway 22, Westport Road, Hurstbourne Lane, Blue Lick Road, and Greenwood Highway have sections where congestion is the norm and safety is a problem. Louisville also has plans, but no funding yet, to construct a light rail system, first for the central corridor along I-65 and then out other major corridors. Louisville's economic competitors are investing continually in modern transportation infrastructure, and we need to make sure we are at least keeping up in this important facet of mobility and attractiveness.

Transportation infrastructure comes down to design and money. In this report we provide an explanation and analysis of transportation financing in Kentucky, with special emphasis on the Louisville area. We draw upon many public sources of data and program descriptions.

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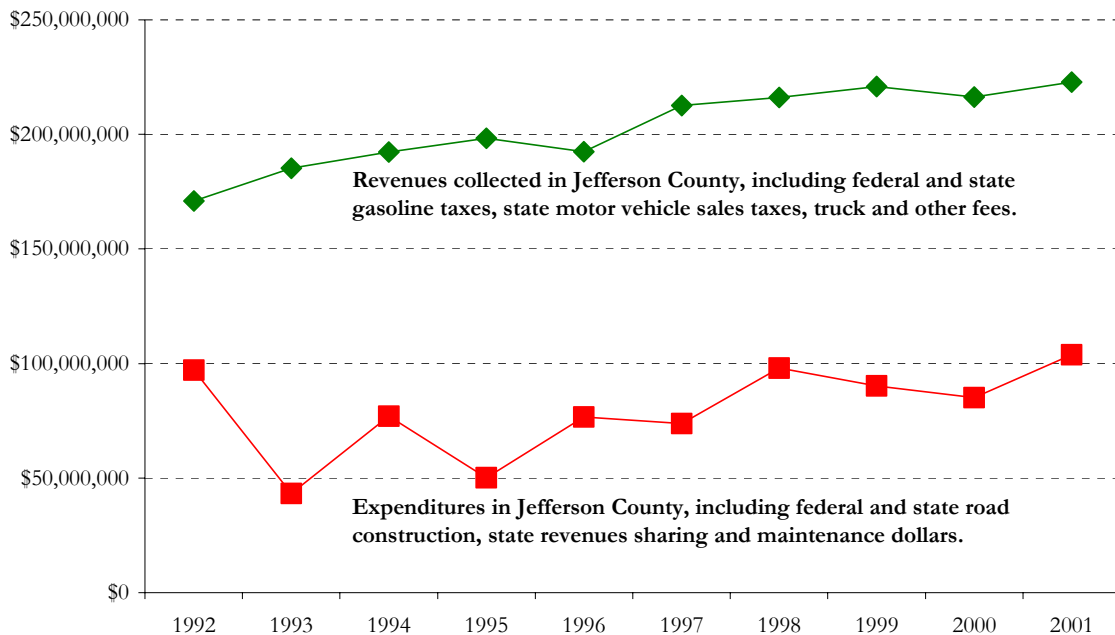
We provide an overview of the way transportation infrastructure is financed in Kentucky, with an explanation of the roles of federal, state, and local governments. Several conclusions can be drawn from this analysis. Among the most interesting and important are:

1. We estimate that Jefferson County generates over \$220 million annually in federal and state transportation dollars, but usually receives less than \$100 million annually in transportation expenditures.
2. Vehicles in Jefferson County consume about 370 million gallons of gasoline per year. This generates \$68 million in federal gasoline taxes and \$60 million in Kentucky gasoline taxes. A six percent sales tax on vehicle purchases generates another \$67 million in road fund revenues from Jefferson County for Kentucky state government. The state also collects another \$26 million in other taxes and fees in Jefferson County annually that go into the road fund.
3. The Louisville has benefited from federal funding of interstate highway projects during the past twenty years. The Interstate 265 (Snyder) loop was completed in the late 1980s. Interstate 264 (Watterson) was rebuilt in the early 1990s, and traffic now moves much more quickly and safely around the first ring of the city. In addition, TARC receives about \$10 million per year in federal funding. Still, Louisville receives about \$25 million less per year in federal highway construction funds and mass transit subsidies than it contributes to the Federal Highway Trust Funds through gasoline taxes.
4. Louisville has had a one-sided fiscal relationship with Kentucky state government. The city/regional economy is the largest source of transportation funds for the state, yet relatively little of these funds are spent in the Louisville area. This funding pattern is evident in the data that we have analyzed for the past decade, but no doubt goes back much further. We estimate that the annual net loss of transportation funds to the rest of Kentucky is over \$100 million. State officials seem to have a longstanding bias towards building roads in isolated places with little traffic, and against addressing the more complex urban needs where most of the traffic occurs.
5. Louisville appears to be falling behind its traditional economic competitors, in terms of transportation mobility and infrastructure. Louisville ranks 32nd highest of the 75 largest markets nationally in congestion hours per driver, and in the last study ranked 42nd in the growth of congestion over the most recent five year period. Ten of fifteen of Louisville's competitor metros have completed an interstate loop around their central business districts. Louisville's plan to build an east end bridge will finally address this need, but its completion is at least ten years away. **Five** of Louisville's competitors have a light rail system underway, and two have plans under review.
6. Louisville also is a net loser in the competition for mass transit dollars nationally. TARC typically receives around \$8 to \$10 million in federal money annually, all for bus-related expenses. However, the Louisville area has received none of the \$8.2 billion in 'new starts' money allocated by Congress since 1998 for light rail, commuter rail, and other fresh mass transit projects. These dollars, partially collected from Louisville area commuters and taxpayers, are being spent on projects around the US, including several of Louisville's prime competitors.

Overview of transportation financing in Kentucky

Transportation in Kentucky is financed and managed almost exclusively by the state and federal governments. Local governments levy gasoline taxes in some municipalities around the US, but not in Kentucky. Federal highway, mass transit, and other transportation funds come to cities and counties of Kentucky through the Kentucky Transportation Cabinet. State government must approve most local projects, even those financed with federal funds. Often federal funding for a local road project is combined with state funds, where the match may vary from 10 to 20 percent.

**Transportation Funds Generated and Spent
in Jefferson County, Last Ten Years**



We analyzed the various sources and uses of transportation funds in detail below. It is useful to portray the totals at the outset, however. We estimate that Jefferson County generated around \$223 million in transportation funds in 2001. This includes federal and state gasoline tax revenues, state motor vehicle sales taxes, truck taxes, and other fees. We estimate that only \$104 million in transportation funds were spent in Jefferson County in 2001. Expenditures include both federal and state road construction projects, federal aid for mass transit, state revenue sharing to local jurisdictions of gas tax receipts, state road maintenance dollars, plus a prorated share of state overhead costs (administration, support, engineering, and debt service).

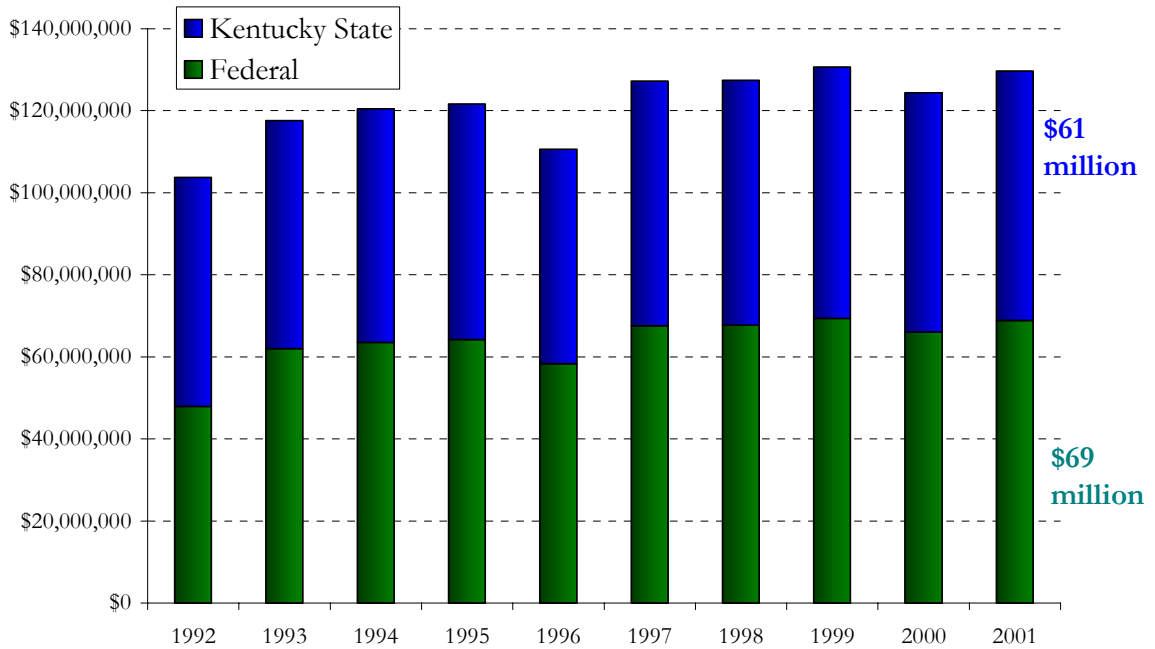
Our estimates imply that Jefferson County lost on net around \$119 million in 2001 through state and federal transportation programs. Furthermore, historical information shows that this is a longstanding trend. We estimate the cumulative net loss to Jefferson County over the last decade to be \$1.2 billion.

Vehicles in Kentucky consumed about 3 billion gallons of motor fuels in 2001, of which 2.2 billion gallons were taxable gasoline. Another 800 million gallons were classified as 'special

fuels', primarily diesel and aviation fuel. The remainder of motor fuel consumption was tax exempt. See *Highway Statistics 2001* (US Department of Transportation). Using population as an allocator, this implies that vehicles in Jefferson County consumed nearly 370 million gallons of gasoline in 2001.

Using historical data on gasoline consumption and federal and state fuel tax rates, we estimate that Jefferson County generated \$130 million in gas taxes in 2001, and \$1.2 billion over the last ten years.

**Estimated Federal and State Gasoline Taxes
Collected in Jefferson County, Last Decade**



The Kentucky Transportation Cabinet exercises the primary control over road construction and maintenance in Kentucky. The state collects funds from taxes and fees statewide, combines that with federal dollars, and controls the allocation of these dollars to projects around the state. A portion of the state's revenues is allocated directly to city and county governments for street and road resurfacing projects locally. The other portion is managed by the state Cabinet, with state planners and engineers designing projects and letting contracts with private construction firms.

There is some regional coordination and planning with the state through the Area Development Districts (ADD). The Louisville-area ADD is called Kentuckiana Planning and Development Authority (KIPDA). KIPDA has a small staff of transportation planners, and maintains a traffic model for the core urbanized area of Jefferson, Bullitt, Oldham, Clark, and Floyd Counties. KIPDA is designated by the federal and state governments as the Metropolitan Planning Organization for the area. This designation gives KIPDA the primary authority to identify and prioritize transportation projects in the region that require federal funding. KIPDA is governed by a board made up of the County Judge-Executives of the

member counties and the chief executives of major cities in each county. It received funding from Kentucky state government and the member counties.

Federal Funds

The federal Highway Trust Fund collects revenues primarily through the federal gasoline tax, which is currently 18.4 cents per gallon. Of the federal tax per gallon, 15.44 cents goes to the highway account, 2.86 cents goes to the mass transit account, and .1 cents goes to the leaking underground storage account. The Trust Fund received approximately \$35 billion in 2001. A majority of these dollars are distributed back to state and local governments based upon formulas that take account of the number of lane-miles of different types of roads, vehicle miles traveled, and types of traffic. For example, Kentucky has 3,400 lane miles of interstate highway, and received \$85 million in interstate road maintenance dollars in FY 2002, 1.9 percent of the national total. Congress also regularly budgets general fund dollars to supplement those received by the Trust Fund, and often directs those dollars to specific projects.

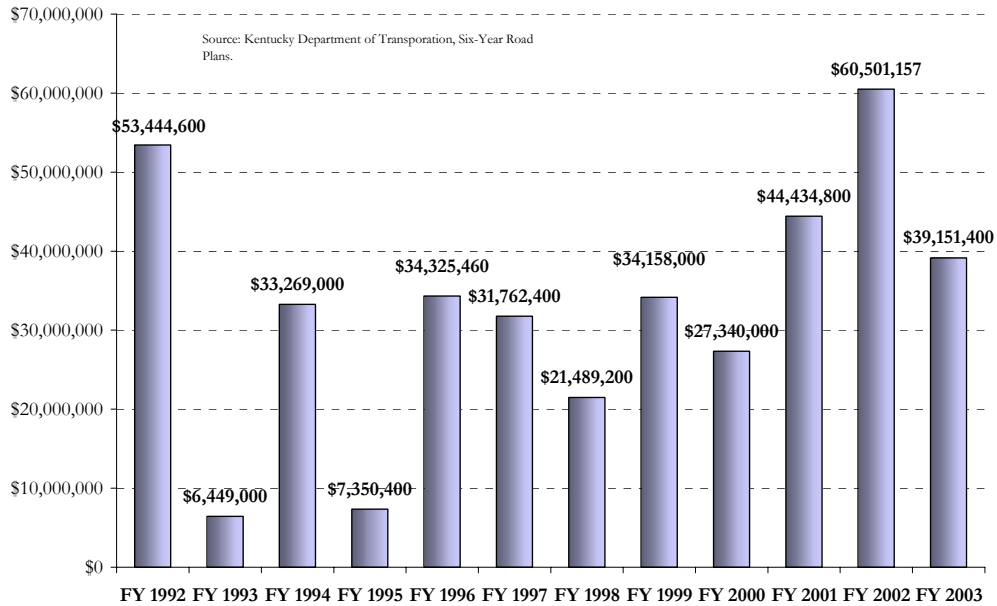
From the point of view of the state total, Kentucky receives back in federal spending on highways and mass transit an amount roughly equal to what it contributes through taxes to the Highway Trust Fund. Currently, this is about \$550 million annually.

The Kentucky Transportation Cabinet, through the state highway construction program, mediates the distribution of most of the federal funds. Other funds go to local mass transit organizations. In our calculations of the amount federal funds which go to Jefferson County we therefore rely on an examination of the state six-year road plans, which define the state highway construction program, and information from TARC budgets.

To determine the state highway construction program funds expended in Jefferson County we first listed all of the projects scheduled to be funded in the first two years of each biennial six-year road plan. For example, we listed all Jefferson County projects marked for funding during the fiscal years 1992 and 1993 in the 1992 six-year plan, for fiscal years 1994 and 1995 in the 1994 six-year plan, etc. We then adjusted for possible double counting of projects by eliminating those projects that were in fact not funded and appear in the subsequent six-year plan. Our calculations also take into account the required state and local matching funds for Federally financed projects. We also compared these estimates to other publicly available information on actual state expenditures on projects.

We found that federal funds expended (and scheduled) in Jefferson County in the highway construction program totaled about \$394 million from fiscal year 1992 through fiscal year 2003. The amount varied widely, from around \$7 million to \$60 million, but averaged almost \$33 million per year.

**Jefferson County Estimated Federal-Funded
Highway Construction Program Expenditures, Fiscal Years 1992-2003**



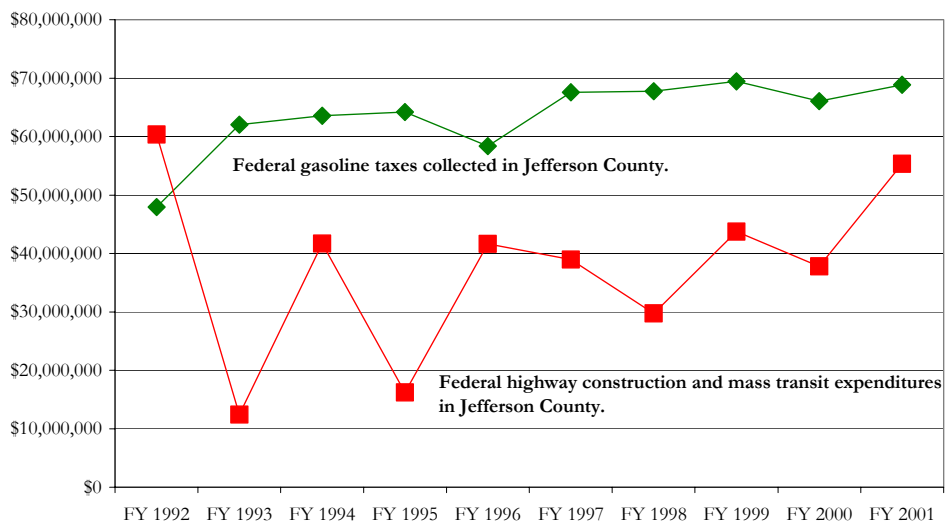
The next chart shows the difference between federal gasoline taxes collected in Jefferson County and expenditures of federal dollars on highway construction projects and mass transit. Over the ten year period, 1992 through 2001, there was an average of \$63 million collected but just under \$38 million of federal highway and mass transit dollars spent in Jefferson County. This resulted in a cumulative loss of \$258 million in federal tax revenues from Jefferson County.

There are two primary federal programs that distribute mass transit dollars to states and areas. The first, the Urbanized Area Formula Program (§5307), directs the mass transit gasoline tax funds to localities based on population, density, and other factors. TARC receives these funds directly from the Federal Transportation Agency, and these amount to less than \$10 million annually for the Louisville urbanized area. These funds are used for bus purchases and operational expenses. Louisville’s share of these federal dollars is approximately equal to Louisville’s contribution to the gas tax revenues that fund the program. The second program, the Capital Program (§5309) provides for the establishment of new rail or busway projects, as well as improvements and upgrading of existing mass transit systems. TARC has received but a few million dollars of the \$5 billion spent on new projects nationally under the §5309 program.

See www.fhwa.dot.gov/tea21/suminfra.htm for an explanation of federal funding formulas and criteria, and www.fta.dot.gov/library/policy/ns/ns.htm for a discussion of the new starts program.

The ‘new starts’ program is of special interest, in that over \$6 billion has been allocated to light rail and commuter rail projects in urbanized areas around the United States, including Louisville competitors Charlotte, Cincinnati, Kansas City, Memphis, Nashville, and Raleigh.

**Federal Highway and Mass Transit Funds Generated and Spent
in Jefferson County, Last Ten Years**



Kentucky State Road Fund

Louisville area residents, workers and travelers pay into the Kentucky State Road Fund through a variety of taxes and fees.

Gas tax. The most visible payment is the gasoline tax that motorists pay when they fill up their tanks. Kentucky levies a tax of 16.4 cents per gallon, which is in addition to the federal tax of 18.4 cents per gallon. The state also levies a tax on diesel and other “special” fuels of 13.4 cents per gallon. The gas and other motor fuels taxes generated about \$424 million for state government in 2002. Approximately \$65 million of that was collected in Jefferson County.

Motor vehicle usage tax. The state levies a tax of six percent on the sale of new and used cars. It is called a usage tax, but is in fact a sales tax. The tax generated about \$400 million for state government in 2002. Approximately \$67 million of that was collected in Jefferson County.

Weight distance tax. Kentucky levies a weight distance tax on trucks. As its name implies, taxes collected are a function of the weight of the truck and the distance traveled in Kentucky. Trucking companies moving up and down the interstate highways, particularly I-75 and I-65, pay most of the taxes. The state collected about \$77 million from the weight distance tax in 2002. Using road traffic data we estimate that about \$5.5 million was allocatable to traffic in Jefferson County.

Other revenues sources. The state also raises road funds from several other sources, including fees for drivers’ licenses, truck decals, tolls, fines, and investment income. These various sources generated about \$170 million in 2002. We assume here that fees collected are

commensurate with the cost of providing services, e.g., to staff local drivers' license testing and issuance offices, and that the geographic distribution of the other revenues sources are identical to the distribution of the taxes discussed above.

Expenditures by Kentucky Transportation Cabinet

Unfortunately, there is no complete accounting of state transportation expenditures by county or region. But we can paint a fairly accurate picture by organizing the substantial amount of public data provided in state budget documents and the historical six-year road plans. The state goes through an annual exercise wherein the various transportation project requests are prioritized for the subsequent six years. State planners and local advocates both have input in the identification of transportation needs. Ultimately though, the decision on which project to fund and complete lies in the political domain – the governor and the legislators. Typically, road projects become part of the currency in political bargaining to garner legislators' votes on other matters, such as parks, university funding, K-12 school issues, or tax proposals.

A component of the regional distribution of state transportation funds is driven by formulae, however, and we consider this first. By statute, 48.2 percent of Kentucky motor fuels tax collections are distributed back to local jurisdictions, as follows: County Road Aid (18.3%), Rural Secondary Aid (22.2%), and Municipal Road Aid (7.7%). A 'formula of fifths' is used to allocate the County and Rural program dollars, with one-fifth each for (1) equal shares to counties (2) percent of the state's rural road mileage (3) percent of the state's rural population, and two-fifths for the percent of the state's rural land area. Municipal Road Aid dollars are distributed to cities based on their percentage of Kentucky's urban population. Estimates for all local jurisdictions were computed using published land area, road mileage, and population data.

Jefferson County's Share of State Road Fund Dollars Distributed by Formula, 2001

	Kentucky State Total	Jefferson County	Jefferson Share
County Road Aid program funds	\$80,619,427	\$674,422	0.84%
Rural Secondary Aid program funds	\$98,295,560	\$822,292	0.84%
Municipal Road Aid program funds	\$32,246,492	\$9,925,692	30.78%
Total 'Revenue Sharing' program funds	\$211,161,479	\$11,422,406	5.58%
Total Revenue Sharing program funds collected in Jefferson County *			
		\$31,557,137	14.9%

Sources: county, rural, and municipal funding data from Kentucky Revenue Cabinet, Department of Local Government, Department of Transportation.

* Jefferson County's contribution to the funds was calculated by taking 48.2% of the estimated KY motor fuels taxes collected in the county.

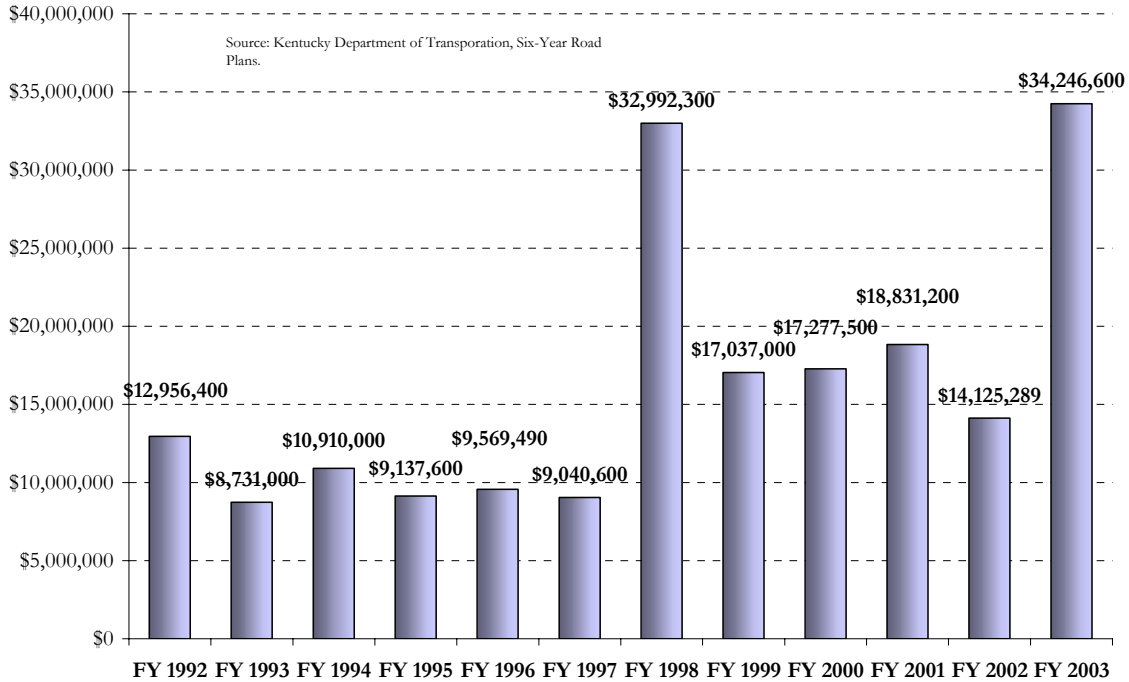
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The table above shows that Jefferson County is a major loser in the distribution of state gasoline tax dollars under the revenue sharing formulas. We estimate that the County generated around 14.9 percent of the gas tax revenues used in the revenue sharing programs in fiscal year 2001, but received only 5.6 percent back. This represented an annual net loss of \$20 million for Jefferson County, and the loss is programmed to continue by state statute. Over the 1992-2001 period the overall net loss to Jefferson County totaled around \$170 million.

We turn now to the discretionary transportation expenditures that make up the largest category of state spending on road construction and maintenance. We have examined the six-year road plans that have been published over the past decade, and compared these to other publicly available information on actual state expenditures on projects.

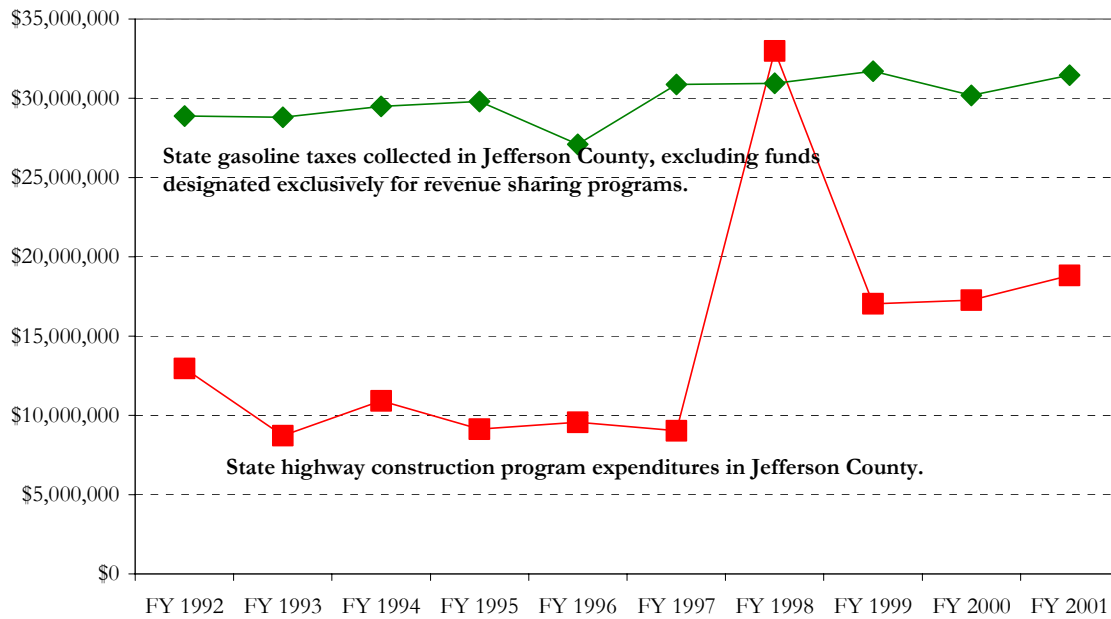
Using the same analysis we used to look at Federal funds going to the highway construction program, we found that state funds expended (and scheduled to be expended) in Jefferson County in the highway construction program totaled nearly \$195 million from fiscal year 1992 through fiscal year 2003. The amount varied from about \$9 million to a high of over \$30 million, but averaged about \$16 million.

Jefferson County Estimated State-Funded Highway Construction Program Expenditures, Fiscal Years 1992-2003



The state portion of the highway construction program is funded largely by the 51.8 percent of motor vehicle fuels taxes that do not go into the state revenue sharing programs. The chart below shows the difference between the state gasoline tax revenues collected in Jefferson County that are not part of the revenue sharing programs and state highway construction program expenditures in Jefferson County (including the state and local match for federally aided projects). Over the ten year period, 1992 through 2001, there was an average of \$30 million collected but just under \$15 million spent in Jefferson County in the state highway construction program. This resulted in a cumulative loss of over \$150 million in tax revenues from Jefferson County. The expenditure outlier year of 1998 is the result of the rare coincidence of construction on four large-scale projects at once (two sections of the Greenbelt Highway, the widening of 7th Street, and reconstruction of Old Henry Road). The spike in 2003 shows ‘recommended’ funding in Jefferson County, as part of the latest road plan. History suggests that actual funding will be much less.

**State Highway Construction Program Funds Generated and Spent
in Jefferson County, Last Ten Years**

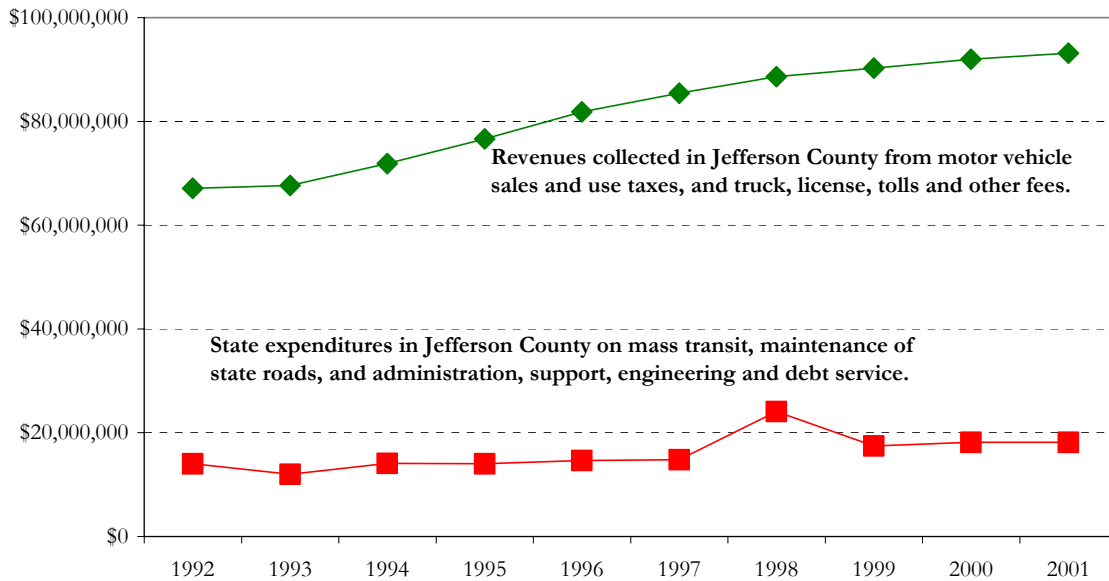


The state expenditures just summarized all utilize funds raised through the motor fuels taxes. However, the state raises almost \$650 million additionally through the motor vehicle usage taxes, weight distance tax, and other revenue sources described above. We estimated Jefferson County’s contribution to the state through these taxes. Motor vehicle usage tax receipts by county are available from the Kentucky Revenue Cabinet. We estimate Jefferson County’s share of the weight distance tax by utilizing Kentucky Transportation Cabinet studies of truck traffic on state maintained roads. The other revenue sources are estimated using information on the number of vehicles registered by county and highway tolls. Currently, Jefferson County accounts for about \$95 million of these other taxes, 17 percent of state motor vehicle usage tax receipts and 11 percent of the other revenue sources.

Although these funds help to pay for construction projects throughout the state, from the point of view of Jefferson County these taxes go towards the maintenance of state roads, mass transit, and overhead costs associated with administration, support, engineering, and debt service. The chart below shows our estimates of the non-motor vehicle fuels tax revenues generated in Jefferson County and the total maintenance, transit, and overhead funds heading back to Jefferson County. State funds for the maintenance of state roads are distributed equally to twelve transportation districts. Within a district, we assume that the funds are distributed according to the share of state maintained road mileage in each county. We allocate the overhead funds according to Jefferson County’s share of the total state spending on construction, revenue sharing, and maintenance. The transit funds are from City of Louisville budget documents. Our calculations show that the state currently spends about \$18 to \$20 million per year in Jefferson County for these things. The

cumulative loss of state non-motor vehicle road fund tax revenues from Jefferson County, over the ten year period 1992 to 2001, was \$653 million.

Non-Motor Vehicle Fuels Taxes Generated and State Mass Transit, Maintenance, and Overhead Expenditures in Jefferson County, Last Ten Years



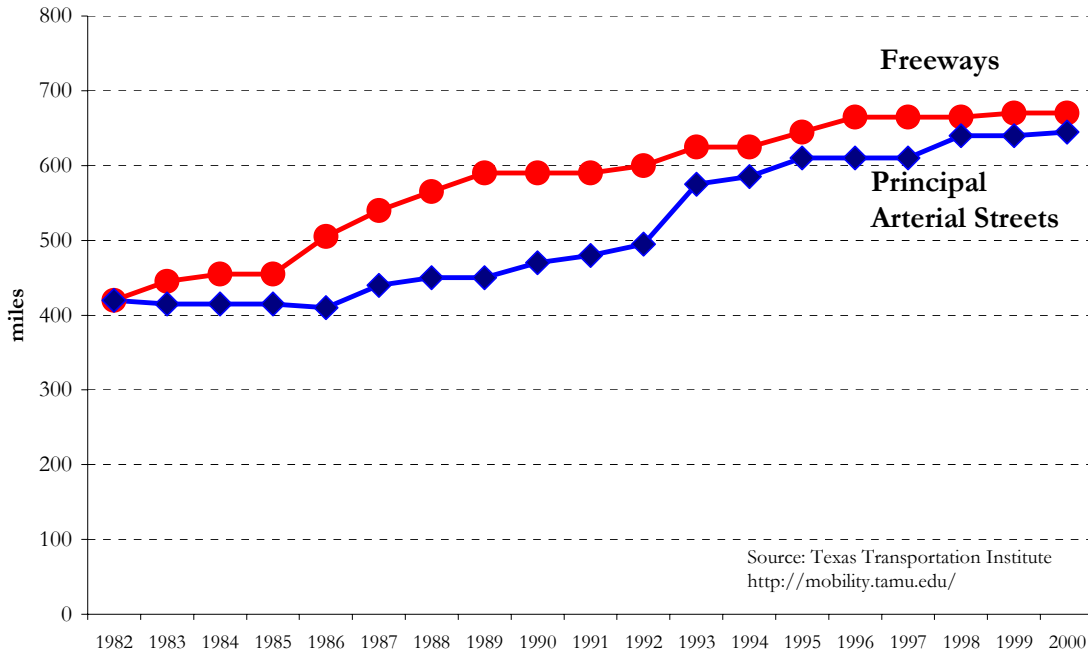
Mobility issues

The Texas Transportation Institute annually tracks traffic conditions in the 75 largest urbanized areas in the US. The latest report applies nineteen years of data (1982-2000) on vehicle lane miles of roadways, vehicle miles traveled, numbers of peak period travelers, travel time, costs of operating vehicles, types of delays, etc., to a sophisticated mobility model. The result is an excellent snapshot of current traffic conditions and the historical trends that led to it. Louisville and eleven of its competitor metros are included in the study. Dayton, Greenville, Raleigh, and Lexington are not part of the TTI report. It should be noted that urbanized areas are generally smaller than metro areas since the latter concept is based upon counties, with the outer counties of most metro areas containing significant amounts of rural land.

The Louisville urbanized area has a stock of over 1,300 lane miles of freeways and principal arterial streets. However, only 60 lane miles were added from 1995 to 2000. From 1982 to 1995 Louisville increased its lane miles by about 3.1 percent per year, but since 1995 that has dropped to 0.9 percent per year. While the population of Jefferson County and the other core counties fell throughout much of the 1980s it began to rise again in the mid-1990s and is now increasing at a rate of about one-half of one percent per year. Some of the surrounding counties, such as Oldham, Bullitt, and Spencer, have had strong population growth over the last ten years. The commuting shed into Jefferson County has greatly increased over the last decade as well. All these trends are reflected in the data for the number of vehicle miles traveled per lane mile of roadway. As the outer fringes of Jefferson

County become developed and more people commute into the central county the freeways are more heavily used.

**Lane Miles of Freeways and Principal Arterial Streets
Louisville**



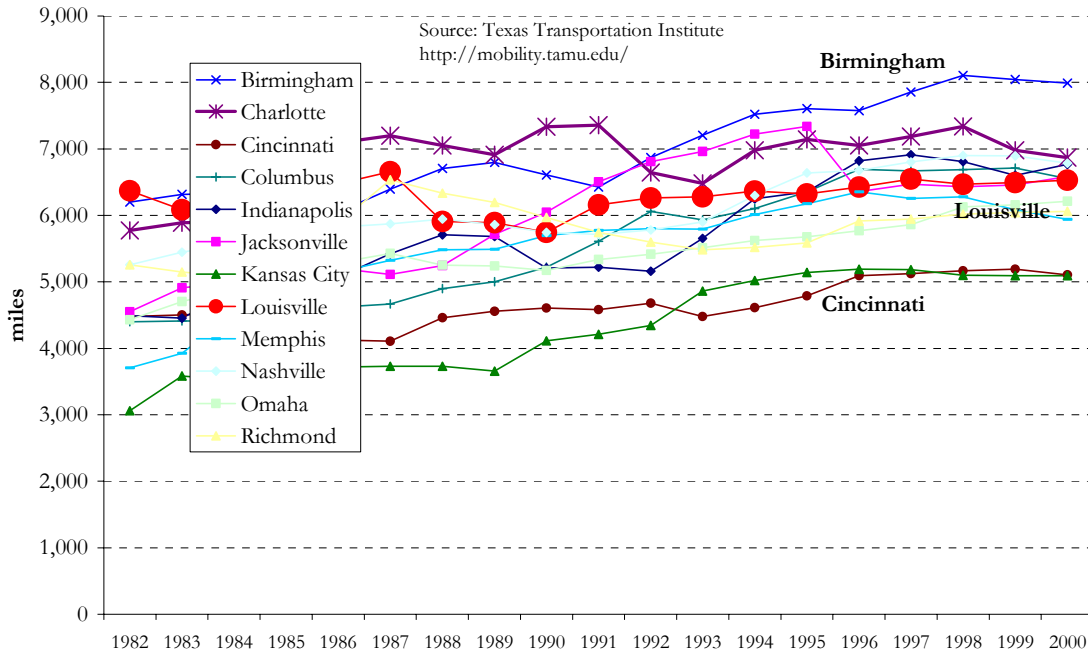
**Growth in Traffic Capacity, Volume
Louisville, 1982-2000**

	Lane-Miles	Vehicle Miles Traveled Daily
Freeways	60%	148%
Principal Arterial Streets	54%	57%

Source: Texas Transportation Institute, <http://mobility.tamu.edu/>

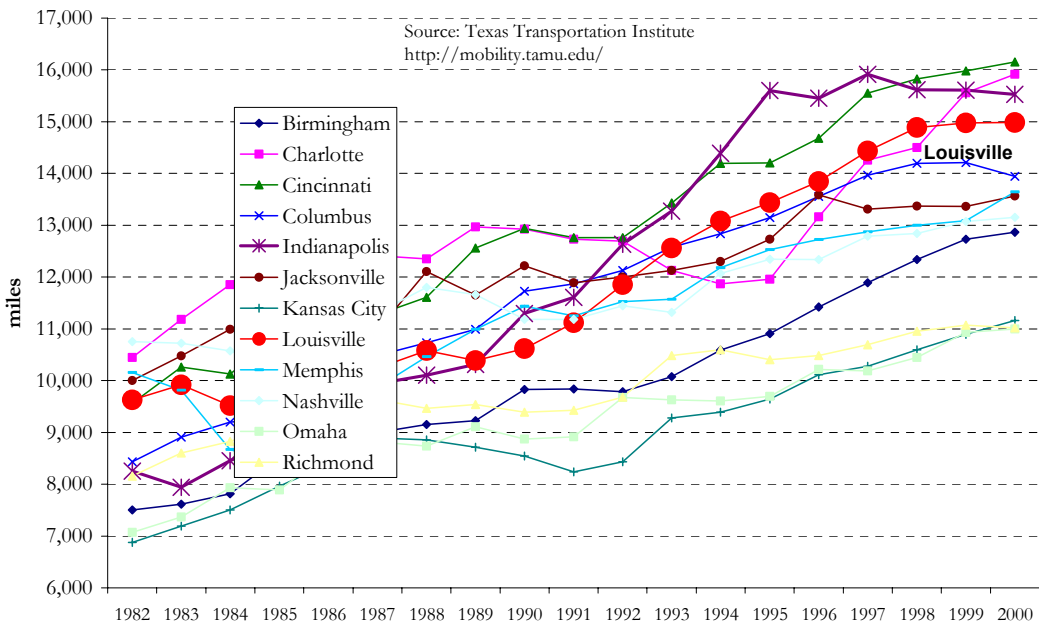
The much greater increase in vehicle miles traveled on freeways versus principal arterial streets is a common phenomenon. Each of Louisville’s competitors experienced the same thing as the geographic boundaries of their urbanized areas spread out over the last two decades. The following two charts show the daily vehicle miles traveled per lane on freeways and principal arterial streets for each of the twelve competitors in the TTI study.

Vehicle Miles Travelled Daily per Lane-Mile on Principal Arterial Streets, Twelve Comparison Cities



In 1982 Louisville had the most intensely used arterial streets in the group. Birmingham, Charlotte, Nashville, Jacksonville, Indianapolis, and Columbus have all caught or passed Louisville on this metric and the gap has narrowed for all the other metros in our comparison group. This reflects both the fact that Louisville was a very compact urbanized area in 1982 and that Louisville has had just moderate population growth near its core over

Vehicle Miles Traveled Daily per Lane-Mile of Freeway Twelve Comparison Cities



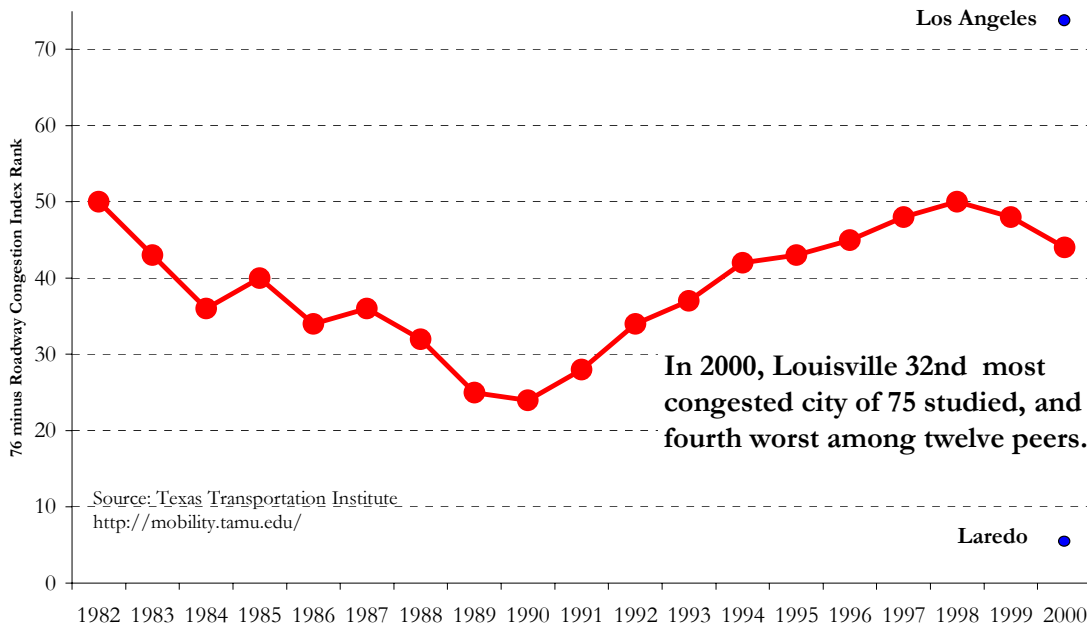
the last two decades. It may also reflect Louisville’s peculiar “hub and spoke” system of arterial streets that tends to funnel people onto the freeways in order to save time going across town.

All of the comparison metros have had the intensity of usage on their freeways increase about the same amount over the study period, with Charlotte being slightly higher than the rest. Louisville currently has the fourth most intensely used freeway system among the twelve, with only Cincinnati, Charlotte, and Indianapolis experiencing more intense usage.

The Texas Transportation Institute study produces a “Roadway Congestion Index” that measures the average amount of delay causing congestion on an urbanized area’s freeways and principal arterial streets. In 2000, Los Angeles was the most congested urban area, while Laredo, TX, was the least congested of the 75 areas studied. Louisville was the 32nd most congested urban area in the study. In 1990 Louisville was the 52nd most congested urban area, but its ranking slipped steadily during the decade with the region’s population growing again.

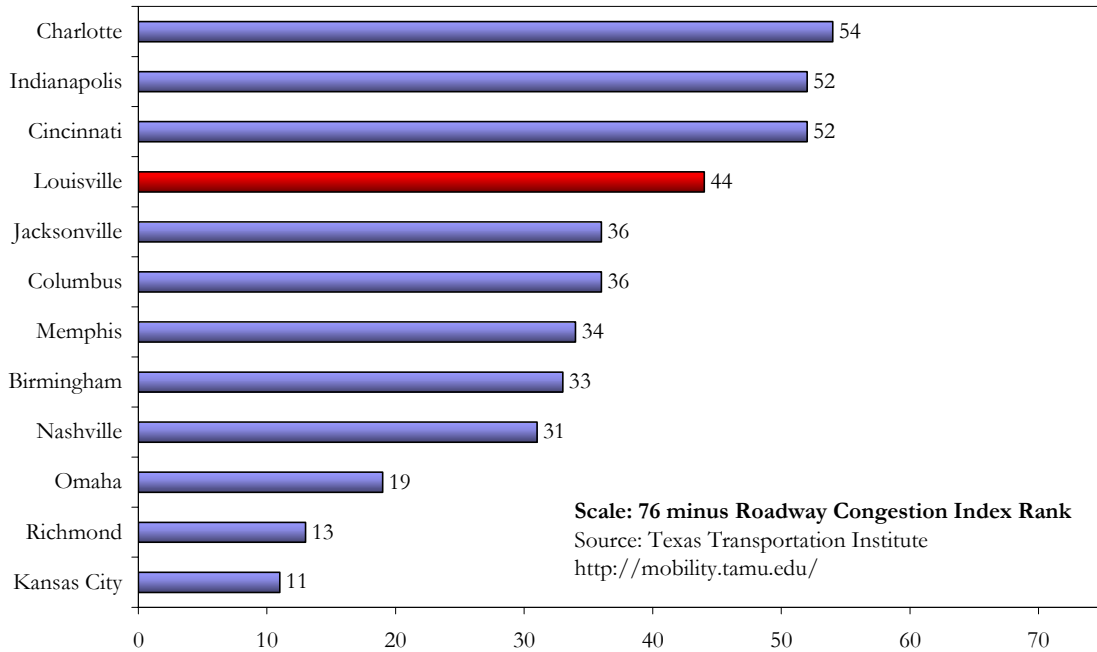
Most Congested Cities

Laredo = 1 Los Angeles = 75



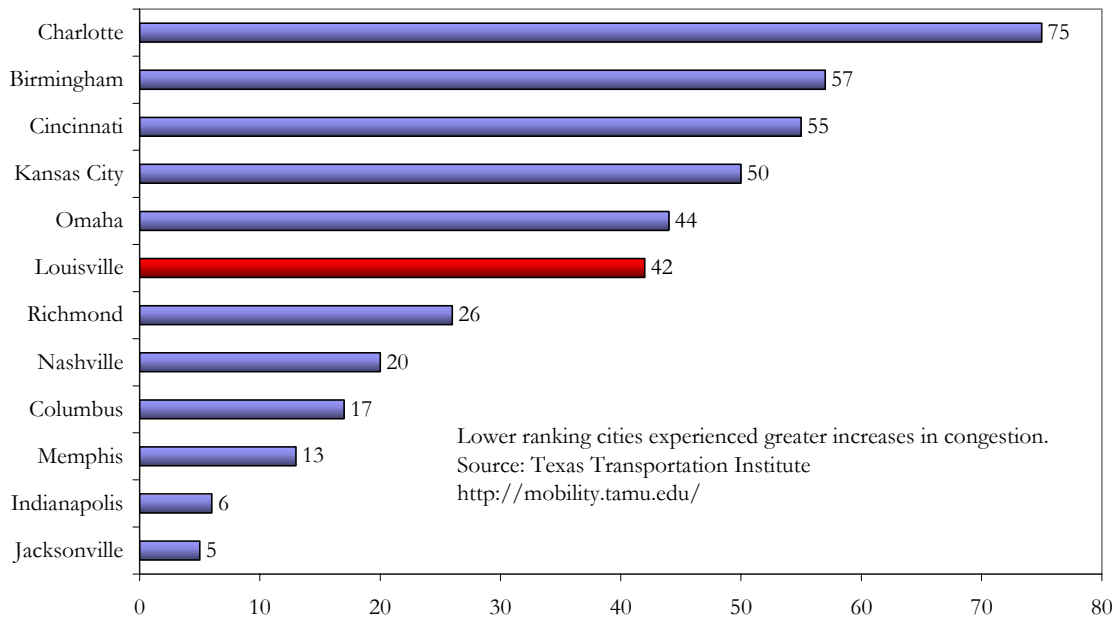
Louisville is the fourth worst of the twelve peers in the study, with only Charlotte, Indianapolis, and Cincinnati being more congested. Kansas City and Richmond are the least congested of the peer urban areas. Kansas City has over two-and-a-half times the lane-miles of freeway as Louisville with just seventy percent more population. Richmond has roughly the same amount of freeway as does Louisville, but just three-quarters of the population in its urbanized area.

Most Congested Cities in 2000 - Louisville and Peers
Laredo = 1 Los Angeles = 75

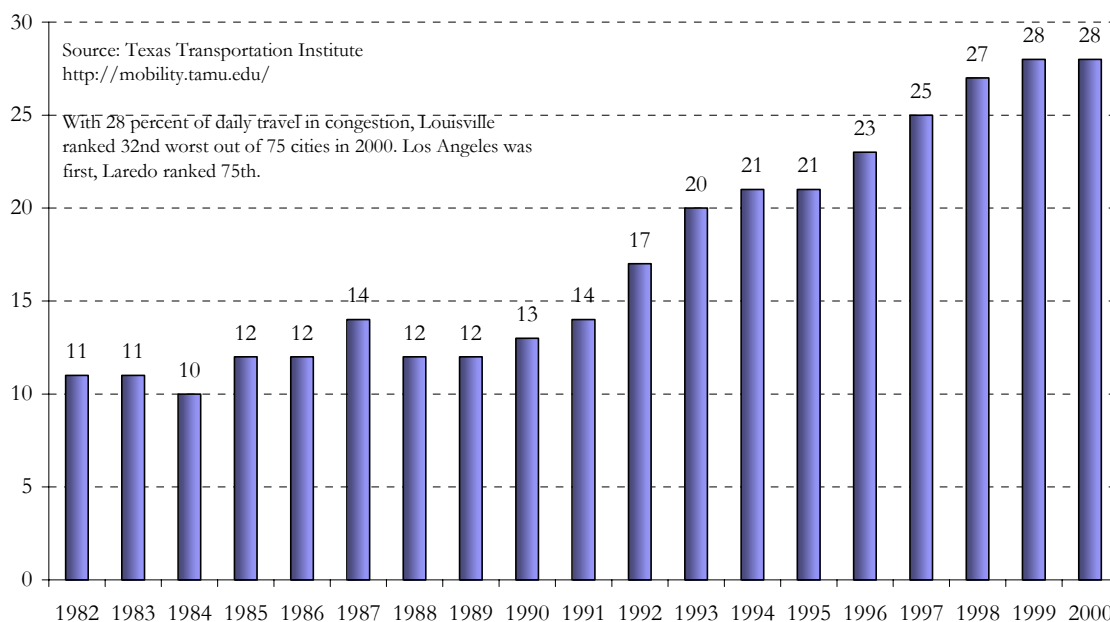


Louisville does look better in relation to its peers in terms of the change in roadway congestion during recent years. In the period 1995-2000, Louisville ranked 42nd among the 75 urban areas in the percent of change in the Roadway Congestion Index. While this

Change in Congestion, 1995-2000
Rank Among 75 Cities, Percent Change in Roadway Congestion Index

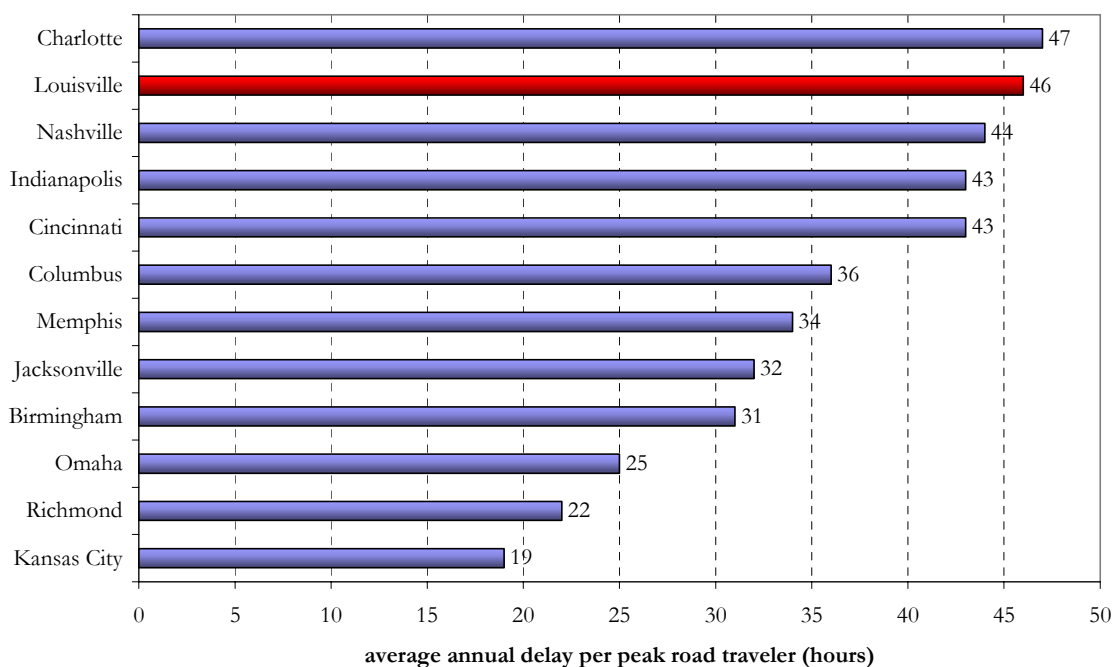


Percent of Daily Travel in Congestion Louisville



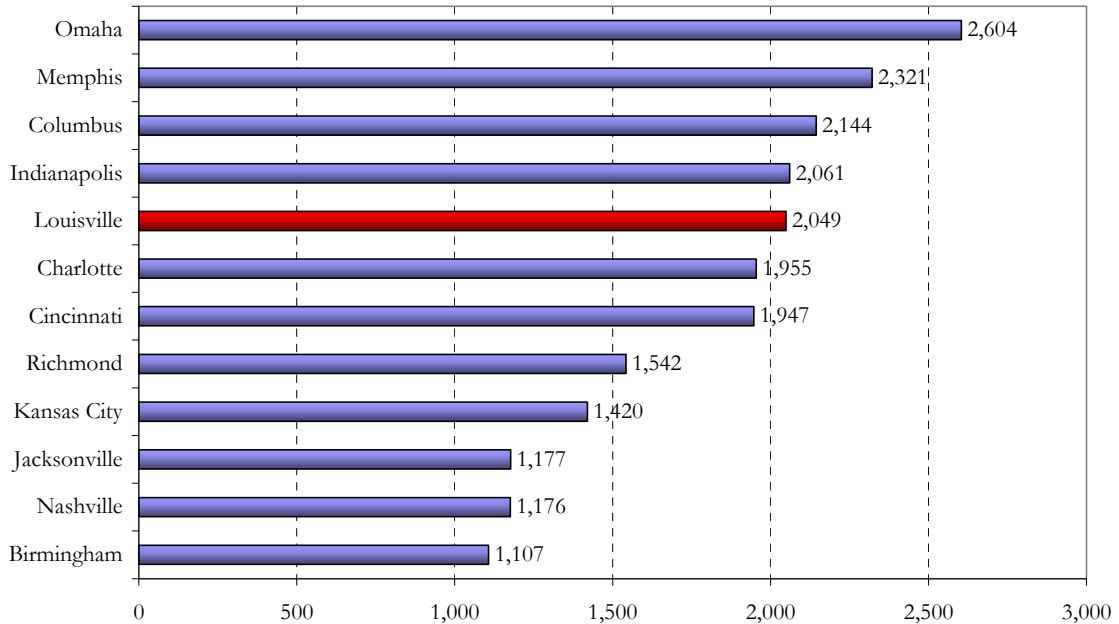
is not particularly encouraging, five of the eleven peer cities in the study were worse, with Charlotte having the greatest increase in congestion over those five years. Overall, the percent of daily travel that meets the study's definition of being in

Average Annual Delay in Hours Per Peak Road Traveler, 2000



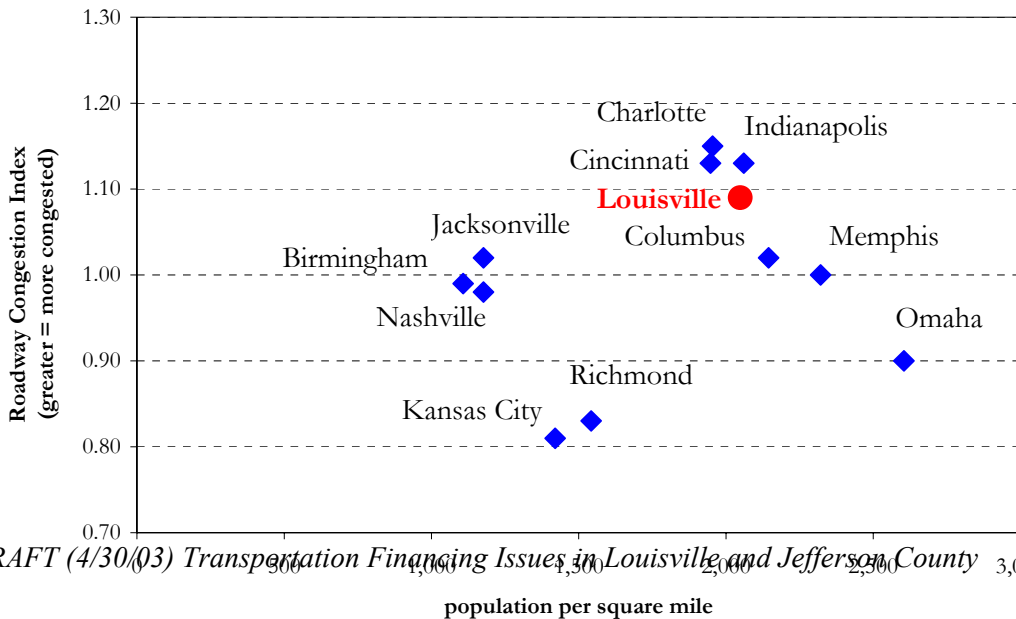
congestion is 28 percent in Louisville. This is more than double the percentage of travel in congestion a decade earlier. Another measure of congestion focuses on road conditions

Population Density of Urbanized Area, 2000
 Mobility Model, Transportation Research Institute



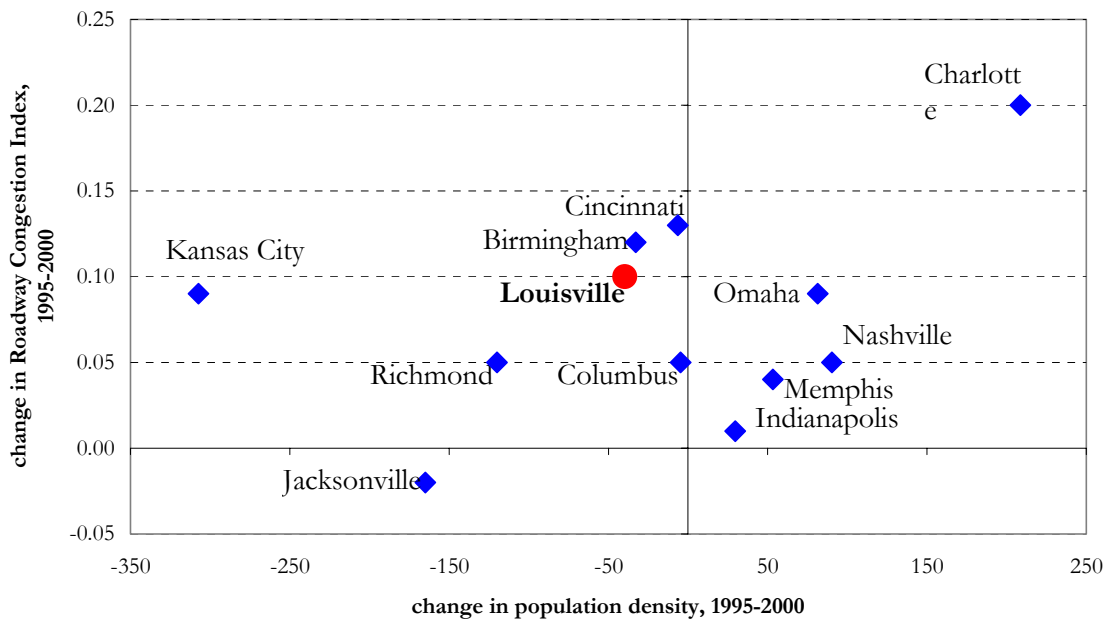
during peak “rush hour” periods. On this measure Louisville fares poorly in comparison with its peers. In 2000 the average Louisvillian experienced 46 hours of delay annually while driving during peak periods. This was just one hour better than Charlotte, the worst of the peer urban areas. In both Kansas City and Richmond rush hour drivers experienced less than half of the delays that Louisville drivers did.

Population Density and Roadway Congestion, 2000
 Mobility Model, Transportation Research Institute



Louisville is one of the most densely populated of the peer urbanized areas, but it doesn't appear that population density is related to overall roadway congestion. Nor does it appear that recent change in the population density of an area is related to changes in overall roadway congestion. The charts below summarize the data on density and congestion. It seems that roadway congestion is dependent upon the particular layout and lane-miles of local roads (especially freeways), geographic terrain, the design of subdivisions, and commuting patterns at the fringe of the urbanized area and beyond.

Changes in Population Density and Roadway Congestion Index, 1995-2000



Policy changes to improve Jefferson County’s financial position

Jefferson County’s transportation financing problems almost all lie in Frankfort. The current revenue sharing system was designed after World War II when the state was primarily rural. Today seventy percent of the state’s population lives in urban, suburban, and exurban counties – most people live and work in cities. Under the current formula almost half of state gasoline tax collections are distributed back to local governments, but only 15 percent of those dollars are earmarked for municipalities.

Similarly, the state road construction dollars are primarily distributed to sparsely populated areas. While this may have made sense forty or fifty years ago, when much of Kentucky was inaccessible and most roads between cities and towns were dangerous, today nearly every corner of the state has decent transportation infrastructure. In fact, most of Kentucky has excess highway infrastructure, given the number of lanes, traffic, and population. Just maintaining this vast rural highway infrastructure will be very expensive in perpetuity.

We recommend that policy makers consider three actions.

1. Change the revenue sharing formula for gasoline tax revenues to reflect better where people live and traffic occurs. Simply redistributing on the basis of population, rather than the current system that funds partly on the basis of land area, would result in \$20 million more dollars available for road work in Jefferson County.
2. Prepare and introduce an Urban Capital Projects plan to absorb a much higher percentage of Kentucky six-year road plans over the next twenty years. It is not hard to make the case that a few urbanized areas have subsidized road projects throughout the rest of the state for decades. It is also not difficult to document the major mobility and safety problems in these cities. What is missing is the political muscle to retrieve the dollars that have been collected in the urban areas.
3. Pass legislation through the Kentucky General Assembly to authorize 'local option gasoline taxes'. Under this innovation, cities and counties could introduce local referenda to raise gasoline taxes in support of transportation improvement projects. Voters tend to support tax increases when they see clear local benefits, and when the tax increases have sunset provisions linked to the completion of capital projects.

References

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