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Getting What You Paid For—Paying For What You Get

Proposals for the Next Transportation Reauthorization

by Randal O'Toole

Executive Summary

When Congress passed the Federal Aid Highway Act of 1956, it gave the Bureau of Public Roads a clear mission: oversee construction of a safe, high-speed Interstate Highway System. As that system neared completion in the 1980s, the mission of the Department of Transportation became increasingly murky. Now the department is supposed to reduce congestion; attract people out of their automobiles; clean the air; promote economic development; improve livability; create a sense of community: and accomplish a variety of other often conflicting goals—most of which are not easily quantifiable.

As the mission became muddied, each surface transportation reauthorization since 1982 has included an increasing number of earmarks, divided revenues among more and more different funds, and added lengthy rules for how those funds may be spent. Each earmark, apportionment, and rule has made transportation spending incrementally less efficient.

This increasing politicization of something that began life as a fairly efficient program is the predictable result of government involvement in what is essentially a private economic activity. The inevitability of such decline is a good argument for abolishing the U.S. Department of Transportation and devolving federal transportation programs to the states.

Short of that, Congress should make every effort to return to a system where people *get what they pay for*—that is, transportation user fees are dedicated to systems that benefit the people who paid those fees—and people *pay for what they get*—that is, people pay the full cost of the facilities they use.

As a second-best solution to abolishing the Department of Transportation, this paper offers eight proposals essential for the 2009 reauthorization to achieve these goals. These proposals include

1. Apportion funds to states based on population, land area, and user fees
2. Require that short-term plans be efficient or cost efficient
3. Create a citizen-enforcement process that will ensure efficiency and cost efficiency
4. Eliminate long-range transportation planning
5. Allow unlimited use of road tolls
6. Eliminate clean-air mandates
7. Avoid earmarks
8. Remove employee protective arrangements from transit law

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Wanted: A Clear Mission

For government agencies to succeed, they need two things. First, agencies must have a clear, narrowly defined mission. "Government will malperform if an activity is under pressure to satisfy different constituencies with different values and different demands," says Peter Drucker. "Performance requires concentration on one goal. It requires setting priorities and sticking to them."[1]

Second, agencies must be supported by a funding mechanism that rewards managers for accomplishing the mission. As William Niskanen describes in *Bureaucracy and Representative Government*, government agencies try to maximize their budgets.[2] So any conflict between an agency's mission and its funding will be resolved in favor of funding.

When Congress created the Interstate Highway System in 1956, it gave a simple mission to the Bureau of Public Roads: oversee the construction of a safe, high-speed highway network throughout the United States. It reinforced this mission by funding the highways out of user fees in the form of gasoline, tire, and truck taxes. This gave the engineers who designed the system a form of feedback: if they built roads people used, they would generate the tax revenues needed to build more roads. While imperfect, it was superior to a system in which transportation planners chase after any tax dollars they can find.

The Interstate Highway System is the largest and most successful megaproject in history. Like all megaprojects, it went over budget and took longer to complete than anticipated. This was mainly due to the last-minute addition of more than 5,000 miles of expensive routes that had not been in the original plans and because the funding system created to pay for the highways failed to account for inflation.[3]

Ultimately, however, the interstates produced enormous benefits for everyone. Though interstate highways make up only 2.5 percent of the lane miles of roads in this country, they carry nearly a quarter of the highway passenger miles and more than 40 percent of highway freight.[4] Counting all forms of travel, they carry 20 percent of passenger miles and 11 percent of all freight.[5]

The increases in speed provided by interstate highways led to huge increases in America's productivity. Researchers estimate that new highways were responsible for an average of about a quarter of America's growth in productivity in the 1950s, 1960s, and 1970s. As the Interstate Highway System neared completion, this contribution tapered off, falling to just 7 percent in the 1980s.[6]

Interstate highways also proved to be far safer than other roads. Users of urban interstates suffer only half the fatalities per vehicle mile as users of other urban roads and streets, while users of rural interstates suffer well under half the fatalities per vehicle mile as users of other rural highways and roads.[7] By attracting traffic away from more dangerous roads, interstates have saved hundreds of thousands of lives.[8]

The Interstate Highway System accomplished all of this without any subsidies. Federal highway user fees paid for 90 percent of the cost of the system, and state highway user fees covered virtually all of the remaining 10 percent.

As the Department of Transportation completed its mission of building the Interstate Highway System, however, Congress failed to give it a clear, new mission. The department still collects gas taxes from the states and redistributes them to the states, but beyond that, the goal of federal surface transportation spending is unclear. Instead, Congress passed numerous laws that gave the department multiple goals that often conflict with one another.

Is the department's goal to promote mobility and relieve congestion, as stated in Congress's "declaration of policy" in 23 U.S.C. 101(b)? Is it to get urban drivers out of their automobiles, as might be inferred from the diversion of gas taxes to mass transit beginning in 1982? Is it to reduce automotive air pollution, as mandated in the Clean Air Act Amendments of 1990? Is it to promote compact urban development, inferred from some

of the requirements of the Intermodal Surface Transportation Efficiency Act of 1991?

This growing list of often incompatible goals has coincided with a severing of the incentives created by funding highways out of highway user fees. More than 15.5 percent of gasoline taxes are now automatically diverted to transit, where they are apportioned into at least 24 different funds.[9] Congress earmarks billions of dollars of other user fees, often to nontransportation projects.

The remaining revenues are apportioned into at least 10 other funds, not all of which are highway related. These include administration, interstate maintenance, the National Highway System, surface transportation, bridges, recreation trails, and metropolitan planning.[10] After deducting all diversions away from highways, as little as 61.5 percent of federal highway user fees are actually spent on highway construction and maintenance.[11] Because of this political division of funds into innumerable pots, state and local transportation planners no longer see any connection between the fees generated by transportation users and the share of federal transportation funds that they collect.

The severing of the connection between user fees and transportation planning is a predictable outgrowth of the Department of Transportation's increasingly murky mission. In 1950, University of Michigan economist Shorey Peterson warned that transportation decisions should focus on quantitative values such as safety and efficiency, and not "broad matters of public interest." Trying to account for the public interest would, he said, lead to "the wildest and most irreconcilable differences of opinion" and make transportation "peculiarly subject to 'pork-barrel' political grabbing."[12] This is exactly what has happened as the department's clear mission to build a highway network was replaced by multiple and conflicting goals.

Efficiency and Cost Efficiency

The Department of Transportation's muddy mission and lack of emphasis on user fees have led to two major problems with U.S. transportation. First, many users no longer get what they pay for. For example, large shares of highway user fees are diverted to other programs. Second, many users do not pay for what they get. For example, rail transit fares rarely cover the operating costs, much less the capital costs, of the trains.

These problems are pervasive throughout our transportation networks, and are not limited to certain modes. Some highway users are cross-subsidized by other users or subsidized by general taxpayers, while many transit users pay the full cost of their transportation.

Two fundamental concepts—*efficiency and cost efficiency*—should be at the center of a sound federal transportation policy. Unfortunately, these concepts have been neglected in recent decades. Although two of the last three transportation reauthorization bills included "efficient" or "efficiency" in their titles, the laws included no enforceable mechanisms to ensure that funds are efficiently spent. As a result, state and metropolitan transportation planners made almost no efforts to ensure that their programs are efficient or cost efficient, and in many cases it is clear that they are extremely inefficient.

Efficiency and cost efficiency are important because resources are limited. If limited resources are invested inefficiently, then public benefits will be reduced and opportunities to generate greater benefits elsewhere will be lost.

Anyone concerned about any transportation-related issues should favor policies that promote efficient and cost-efficient facilities. Worried about safeguarding the taxpayers' pocketbooks? Then you need efficient systems. Want to reduce greenhouse gas emissions? Then you need cost-efficient policies. Every ton of greenhouse gases abated by projects that cost $10,000 a ton means 999 tons are not abated by projects that cost only $10 a ton.

Efficiency and cost efficiency are two different things. *Efficiency* can be calculated only when all benefits and costs can be measured in dollars. A program or plan is efficient if all

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of the individual components or projects in the plan have benefits that are greater than their costs. If funding is limited, then only the projects with the greatest benefit-cost ratios should be funded.

Cost efficiency is calculated when some of the benefits cannot easily be measured in dollars. Those benefits might include such things as hours of congestion relief or tons of greenhouse gases abated. These benefits are estimated for each candidate project along with the dollar costs. The projects are then ranked in terms of dollars per hour of congestion relief, dollars per ton of greenhouse gases abated, and so forth. Only the projects with the highest rankings (lowest cost per unit of benefit) should be considered.

Efficiency calculations go hand-in-hand with projects that can be paid for out of user fees. If users are willing to pay for the full costs of building, maintaining, and operating a transportation facility, then that facility is efficient by definition. The weakening connection between transportation policy and user fees means that policy makers and planners have little incentive to worry about efficiency.

For many people, some parts of our transportation network have been subsidized for so long that the idea of funding transportation out of user fees seems as obsolete as letting private banks issue their own money. "Transportation is a public good," they say, meaning people benefit from it even if they don't use it.[13]

Through its orgy of earmarking and apportioning funds into dozens of ever-smaller pots of money, Congress signals that politics are more important than efficiency in allocating transportation funds.

To some degree, almost anything—food, shelter, transportation, even entertainment—can be considered a public good. But for the most part, these things are private. Nearly all of the benefits of passenger transportation go to the people who are being transported, so they should pay the cost. If society believes that low-income or disabled people need subsidies or a safety net, that is a different question and can be dealt with by the states, such as by using "transportation stamps" similar to food stamps.

Cost-efficiency calculations must be made when social concerns such as pollution or safety are paramount. To be effective, the benefits must be selected using the standards set by the Government Performance and Results Act of 1993: that is, they must be "outcome-related" and "quantifiable."[14]

Clean air, for example, is an outcome that can be quantifiably measured in pounds or tons of various pollutants. *Safety* is an outcome that can be measured in fatality, injury, or accident rates. *Reduction in vehicle miles traveled*, however, is not an outcome: it is a means to other outcomes such as clean air and safety. Since reducing the effects of driving may be more cost efficient at achieving these outcomes than reducing driving itself, reducing driving should not be a cost-efficiency goal.

The difference between efficiency and cost efficiency raises the potential for conflicts: the most efficient program may not be the most cost-efficient way of reducing pollution, and the most cost-efficient way of reducing pollution may not be the most cost-efficient way of increasing transportation safety. In practice, such conflicts are not as serious as might be thought because the most efficient programs also tend to be cost efficient in achieving various other social goals. Since reducing congestion also reduces energy consumption, pollution, and greenhouse gas emissions, projects that are cost-efficient at reducing one are often cost efficient at reducing the others.

Despite the importance of developing efficient and cost-efficient transportation programs, these concepts play very little role in transportation policymaking and planning today. Through its orgy of earmarking and apportionment of the remaining funds into dozens of ever-smaller pots of money, Congress signals that politics is more important than efficiency in allocating transportation funds.

The Department of Transportation gives minimal consideration to efficiency or cost efficiency when selecting which projects to fund. In one of the department's few token nods to cost efficiency, the Federal Transportation Administration has a "cost-effectiveness" rating requiring that, to get federal funding, transit projects must cost less than $24 per "hour of transportation user benefit."[15] This means, however, that a project that costs

$23.99 per hour is as likely to be funded as a project that costs only $0.99 per hour, even though the latter project is more than 24 times as cost efficient as the former.

To the extent that the terms "efficiency" and "cost efficiency" appear in state and metropolitan transportation planning documents, they are misunderstood or misused. For example, planners claimed that the plan for Los Angeles was cost efficient because its benefit-cost ratio was greater than 1.0.[16] This is a misuse of the term cost efficient, which is not measured in benefit-cost ratios: efficiency is. Moreover, a plan is only efficient if all projects in the plan have ratios greater than 1, yet a plan can have a benefit-cost ratio greater than 1 even if many of its projects have benefit-cost ratios less than 1. The Los Angeles plan made no effort to show that all of its projects had ratios greater than 1 (and some certainly did not).

Concerned about government waste, the Utah state legislature required Utah metropolitan planning organizations to do a cost-efficiency analysis of each project considered in their plans. After the plan for the Salt Lake City region was done, a state auditor found that planners had "cooked the books" to boost the apparent cost efficiency of certain politically favored projects.[17] Despite this public revelation, the metropolitan planning organization continued to support the politically favored, but cost-inefficient, projects.[18]

A recent review of long-range transportation plans for the nation's 70 largest metropolitan areas found that almost none of them considered efficiency or cost efficiency when preparing plans or selecting projects to be funded.[19] Many of the plans did not even mention such concepts, and those that did, other than Salt Lake City's, failed to offer any evidence that planners had given them serious consideration.

Among transportation users, too much debate over transport funding has focused on modes rather than efficiency. Is mass transit inherently superior to driving? Are trains inherently superior to buses? Should cities create auto-hostile streets in order to promote bicycling and walking?

Debates over modes are often based more on myth and fantasy than on any real evaluation of benefits and costs.[20] Rather than getting transfixed by one mode or another, federal policymakers should create systems that encourage state and local transportation planners to find the most efficient or cost-efficient modes and transportation facilities for their areas.

Congestion, Infrastructure, and Economic Stimulus

Since Congress's mission for the Department of Transportation began to lose focus in 1982, the amount of time people waste in urban congestion has quintupled and the cost of congestion has increased by 10 times. The Texas Transportation Institute estimates that the total cost of congestion to commuters was $78 billion in 2005.[21] When the cost to businesses that must, for example, purchase and operate more delivery trucks to make the same amount of deliveries is taken into account, the total cost must be more than $100 billion a year.[22] These costs directly resulted from the politicization of transportation decisions that were once made primarily on safety and efficiency grounds.

When the Interstate 35W bridge collapsed in Minneapolis in August 2007, many blamed the collapse on inadequate maintenance and infrastructure funding. "Nearly 30 percent of bridges in the U.S. are structurally deficient or functionally obsolete," CBS News breathlessly reported. "You heard that right: one-third of the bridges in the U.S. should have a sign that says, 'Use at your own risk.'"[23]

Although congestion is a real and serious problem, the infrastructure panic was largely fabricated. The National Transportation Safety Board concluded that a design flaw, not inadequate maintenance, led to the Minnesota bridge collapse. No U.S. bridge has failed due to inadequate maintenance for more than 20 years. In the 30 years prior to that, only three to four bridge collapses can be blamed on inadequate maintenance. These include Tennessee's

When a Utah state auditor found that planners had "cooked the books," Salt Lake City planners continued to support the cost-inefficient projects.

Hatchie River Bridge in 1989, New York's Schoharie Creek Bridge in 1987, and Connecticut's Mianus River Bridge in 1983.[24] The collapse of the Silver Bridge across the Ohio River in 1967 led to significantly improved maintenance procedures, but the collapse itself was mainly due to a design flaw.[25]

What about the "one-third of the bridges in the U.S." that are supposedly risky to drive upon? That's based on Department of Transportation reports that 12.1 percent of roadway bridges are *structurally deficient* and 13.3 percent are *functionally obsolete*.[26] Note that CBS News rounded up the total—less than 26 percent—to "almost 30 percent," which it immediately inflated to "one third" (which, of course, is 33.3 percent).

CBS News rounded up 25.4 percent to "almost 30 percent," which it immediately inflated to "one third"—when in fact the real number of deficient bridges was 12.1 percent.

At most, however, the real number was 12.1 percent (meaning that the CBS News report was merely 175 percent too high). The 13.3 percent of bridges that are "functionally obsolete" are not in any danger of falling: they merely have narrow lanes, inadequate overhead clearances, overly sharp on- and off-ramps, or other outdated design features. These bridges pose no risk to auto drivers unless the drivers themselves behave recklessly.[27]

The 12.1 percent "structurally deficient" bridges have suffered enough deterioration or damage that their load-carrying abilities are lower than when they were built. But that still doesn't mean they are about to fall down; although they may be closed to heavy loads, the most serious problem is that they cost more to maintain than other bridges.[28]

A close look at the data reveals that more than 90 percent of structurally deficient bridges are local—not state or federal—and more than 80 percent are rural.[29] The average structurally deficient bridge is also less than three-fourths the size of an average bridge in good condition.[30] In other words, these are not George Washington or Golden Gate bridges; the vast majority are small rural county bridges that receive little use. Moreover, far from being a growing crisis, the number of structurally deficient bridges has declined by nearly 50 percent since 1990.[31]

This should not be surprising since, as noted recently in the *New York Times*, U.S. spending on infrastructure as a percentage of our economy is greater than at any time since 1981. The real problem, the *Times* reports, is "an utter lack of seriousness in deciding how that money gets spent." The results are numerous "monuments to waste."[32]

This is exactly what happened when Congress decided to stimulate the economy by spending more money on transportation. First, the fabricated infrastructure panic led to a serious misallocation of resources. Instead of focusing funds on projects that would relieve congestion, highway funds were focused on infrastructure repair. Second, other transportation funds were dedicated to "monuments to waste": politically attractive, yet practically useless, capital projects.

The stimulus bill raised two important questions that will come up again during transportation reauthorization. First, how can Congress target funds where they are most needed? Second, how do we pay for infrastructure when the federal government is already experiencing record deficits?

The answer to both questions is simple: user fees. Infrastructure may be publicly or privately owned, but most infrastructure—including virtually all transportation infrastructure—is privately used. That means it can be funded out of user fees such as tolls and fares.

Funding infrastructure out of user fees ensures that infrastructure investments are worthwhile, because a key test of value is whether users are willing to pay capital and operating costs. Infrastructure funded out of user fees also makes no long-term contribution to federal deficits. An ideal economic stimulus, then, would be in the form of loans, not grants, to state and local governments to build infrastructure whose costs will be repaid out of user fees.

Some infrastructure may produce values that cannot be captured by user fees, such as reducing pollution or greenhouse gas emissions. Funding of such infrastructure should focus on cost efficiency. Coordinating traffic signals can save people time, fuel, and reduce greenhouse gas emissions at a cost of about

$10 per ton. Building rail transit may not even reduce greenhouse gas emissions, but when it does so, it costs more than $5,000 a ton. No new rail line should be built until all traffic signals are coordinated and other more cost-efficient solutions are fully funded.

Any efforts to use infrastructure spending to stimulate the economy, whether within or in addition to transportation reauthorization, should rely heavily on user fees and other tools to ensure that such funds are spent in a cost-efficient manner.

Finding Appropriate Federal and State Roles

The increasing numbers of earmarks in federal transportation law, the growing diversion of funds from highway users to other forms of transportation, and the apportionments of federal transportation dollars to more and more different funds are all symptoms of the politicization of surface transportation programs. This politicization, combined with the failure of transportation systems to evolve beyond technologies developed in the 1950s, are signs of the stagnation that inevitably results from government control.

The best way to fix these problems will be for Congress to abolish the Department of Transportation, eliminate federal gas and tire taxes, and allow the states to take over surface transportation programs. The states, in turn, should privatize state highways. Counties and cities should manage local roads and streets through a combination of privatization and funding through vehicle-mile charges or local gas taxes. These changes should lead to dramatic improvements in transportation productivity, safety, and speeds.

This ambitious long-term agenda is unlikely to happen in the 2009 or 2010 reauthorization of federal surface transportation programs. In lieu of such reform, the following eight proposals aim to improve the efficiency of surface transportation programs without foreclosing options to implement more dramatic reforms when the opportunity arises.

Eight Proposals

1. Apportion Funds to States on the Basis of Population, Land Area, and User Fees

Currently, complex formulas in 23 U.S.C. 104 and 49 U.S.C. sections 5336, 5337, and 5340 apportion most federal surface transportation funds into at least three dozen different accounts. These complex formulas are the result of political debates and negotiations that seek to find a "fair" allocation of revenues between modes and geographic areas. But the result may not be fair and is certainly not efficient. The current highway formula may not be fair because it takes money from densely populated states (so-called "donor states") and gives it to sparsely population states (so-called "recipient states"). The transit formulas are not efficient because they reward transit agencies that build or retain high-cost rail transit systems and penalize agencies that focus on low-cost bus systems.

These complex formulas should be replaced with a simple formula that will not dictate how funds will be spent. Instead, it should simply distribute funds to the states based on simple measures including population, land area, and the transportation user fees collected in the state. Making user fees a prominent part of the formula will give state and metropolitan planners incentives to invest in efficient transportation projects that will cover much, if not all, of their costs out of user fees. It will also discourage them from relying on general taxes to pay for transportation projects, because—unlike user fees—such taxes will not be matched by federal funds.

User fees would include gasoline taxes, motor vehicle registration fees, weight/mile taxes, tolls, transit fares, and any other fees collected by transportation agencies that are dedicated to transportation. They would not include any gasoline taxes or other fees that are spent on nontransportation purposes. Nor would they include general sales, property, or income taxes that state or local governments might appropriate to transportation.

The current formulas for apportioning

Congress should distribute funds according to a simple formula that accounts for each state's population, land area, and transportation user fees.

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highway funds use such factors as lane miles, vehicle miles, and the ratio of diesel fuel used on the highways in each state (which is apparently a proxy for truck traffic). None of these are truly goals and could be seen as creating perverse incentives, for example, to build too many lane-miles of roads. Population (the people to be served by transportation networks), land area (the area to be served), and user fees (representing how people value transportation) are much better factors that avoid such perverse incentives.

A formula that allocates 50.0 percent of the funds based on user fees, 45.5 percent based on population, and 4.5 percent based on land area produces results that are reasonably close to the current allocations. The main losers from such a formula are states that, because of low gas taxes or other factors, do not currently collect many user fees.

For example, the two biggest losers are Wyoming and Georgia, which also have two of the nation's lowest gas tax rates of 14 and 8 cents per gallon.[33] Wyoming contributes 0.5 percent of all federal highway taxes, but collects only 0.2 percent of state and local user fees, so its share of federal funds would decline by 55 percent. Georgia contributes 3.9 percent of all federal highway taxes but collects only 1.2 percent of state and local user fees, so its share of federal funds would decline by 41 percent.[34]

These and other states can increase their share of federal funds by increasing gas taxes or other transportation user fees. This would lead to a "race to the top" in which state and local areas increasingly relied on user fees rather than sales, property, or other general taxes to pay for transportation facilities.

Beyond the allocation formula, Congress may want to direct states to allocate a certain percentage of their funds to urban areas based on population, user fees, or other criteria. Congress may also want to limit federal matching funds to no more than a fixed amount—say 50 percent—for any capital project (and that fixed amount should be the same for all types of projects). Beyond this and the cost-efficiency criteria in Proposal 2, below, Congress should keep specifications for how funds should be used to a minimum.

2. Require That Short-Term Plans Be Efficient or Cost Efficient

Congress currently requires states and metropolitan areas to write short-term transportation plans, known as *transportation improvement plans*, or TIPs. However, the law contains few requirements that would ensure that TIPs are cost efficient. To make such plans cost efficient, Congress should require that planners follow a four-step process:

1. TIP planners should identify goals that are true outputs. Congress may want to specify certain goals including safety, congestion relief, clean air (in nonattainment areas), and energy efficiency. Under no circumstances should goals include such things as reduced miles of driving, population densities, or per-capita transit ridership, as these are only means to output-oriented goals.
2. Planners should identify all possible transportation projects that could achieve one or more of those goals.
3. Planners should rank all of the projects according to their efficiency and cost efficiency in achieving each of the goals. Rankings should take into account both the amortized capital cost and the operating cost of each project, including dollar, energy, and other costs. Each alternative in the plan would consist of the projects that have the highest cost-efficiency rankings in meeting one of the goals of the plan, up to the limit of available funds.
4. Based on these alternatives, planners should develop a preferred alternative that achieves some appropriately weighted average of all of the goals.

3. Create a Citizen-Enforcement Process That Will Ensure Efficiency and Cost Efficiency

Congress should place the burden of proof that transportation improvement plans are effi-

cient or cost efficient on the state agencies and metropolitan planning organizations writing the plans. To enforce this burden and to discourage state and metropolitan planners from "cooking the books" to bias the process towards politically favored projects, the secretary of Transportation should create an appeals process that citizens can use to ask the secretary to review and reject plans that may not be efficient or cost efficient.

Citizens could challenge plans based on their failure to consider a full range of projects, because they selected a project or alternative that is not cost efficient in meeting the goals, or because they fabricated data to make it appear that a project is cost efficient when it is not. States or urban areas whose plans are not cost efficient would be denied a share of their federal funds until they are made cost efficient.

Similar appeals processes already exist in many other agencies. For example, the Forest Service allows citizens to appeal its plans, and the Department of the Interior has a Board of Land Appeals. These appeals processes provide a low-cost way of settling disputes and ensuring that local officials follow national laws and policies. The Department of Transportation's appeals process would be unique in that it would focus on cost efficiency, something that has not been an enforceable standard in most other agencies.

Citizens unsatisfied with the Secretary's decision could take the plans to court. Since the efficiency and cost-efficiency criteria are clear and easily quantifiable, a minimal amount of litigation should be needed to set standards that state and metropolitan transportation agencies must follow. Once those standards are set, agencies will have an incentive to meet them in order to avoid having their plans overturned by the Secretary.

4. Eliminate Long-Range Transportation Planning

Congress currently requires states and metropolitan areas to write and regularly update long-range (20 years or more) transportation plans.[35] Yet these plans actually do more harm than good.

No one can predict transportation needs 5 years from now, much less 20 years. Yet, once written, plans often get politically locked in, no matter how actual needs or facts change.

For example, as a part of a political deal among all of Denver's local governments, Denver wrote a transportation plan that included building a commuter-rail line to the distant suburb of Longmont. When the plan was written, planners estimated it would cost $16 per trip to carry riders on the line. Since then, projected costs have increased by 59 percent and projected ridership has declined by 45 percent. The line is now projected to cost $60 per trip, while bus-rapid transit along a parallel route is projected to cost less than $10 per trip.[36] Yet neither Denver's transit agency nor Denver's metropolitan planning organization is seriously considering not building the rail line.

Since no one can accurately predict the future, Congress should not require states and metropolitan planning organizations to pretend they can. Congress should also eliminate requirements that at least 1.25 percent of federal transportation funds should be spent on planning. Beyond the steps listed in Proposal 2, Congress should not specify any detailed planning processes, such as public involvement or clean-air conformance.

5. Allow Unlimited Use of Road Tolls

As cars become more fuel efficient and alternative fuels become available, the gas tax is increasingly ineffective as a way of raising funds for transportation. In the long run, tolls are a better way of paying for major highways, especially highways that are likely to become congested.

When Congress first created the Interstate Highway System in 1956, it rejected tolls as a way of paying for roads because of the congestion and delays created at tollbooths. Today's electronic tolling systems, including automatic recording of license plates of vehicles without toll transponders, eliminates this objection. Tolls have the added advantage over gas taxes in that they can vary according to the actual cost of the road and by the amount of traffic in order to smooth out the peaks and

To ensure efficient transportation funding, citizens should be able to appeal plans that lack a full range of alternatives, that are not cost efficient, or that fabricate data.

troughs in travel demand and thereby eliminate congestion.

While Congress has removed the absolute prohibition against tolls, current law still contains several restrictions against tolls. For example, 23 U.S.C. 129 authorizes a limited number of toll projects. Beyond this, 23 U.S.C. 301 requires that all other federally funded roads be "toll-free." These limits and restrictions should be eliminated.

6. Eliminate Clean-Air Mandates

Air quality was a serious problem in most U.S. urban areas in the 1960s, and automobiles were guilty of causing much of that problem. The Clean Air Act of 1970 led to two very different approaches to solving that problem. First, the law required automakers to build successively cleaner cars. Second, the Environmental Protection Agency encouraged cities to adopt plans that would attempt to modify travel behaviors by discouraging driving and promoting mass transit.

Today, nearly 40 years later, the results of these two approaches are clear. The technical solutions to tailpipe emissions have largely eliminated air pollution in most urban areas.[37] At the same time, efforts to reduce air pollution by getting people to drive less were largely unsuccessful, and may even have done more harm than good: one popular technique to discourage driving is to increase congestion, yet cars pollute more in congested traffic.[38] As commuting expert Alan Pisarski recently told the Institute of Transportation Engineers, "the solution to air quality issues in the United States is attributable to . . . at least 95 percent technology (some say 105 percent)," while behavioral tools provided only minus 5 to 5 percent of the solution.[39]

Although air quality should be an important goal of transportation, it should not override other goals such as congestion relief or safety.

According to Harvard transportation experts Arnold Howitt and Alan Altschuler, the Clean Air Act Amendments of 1990, combined with the 1991 transportation reauthorization law, "arguably made air quality the premier objective of the nation's surface transportation programs."[40] Yet, because they focus on ineffective behavioral controls aimed at reducing per-capita driving, many of the clean-air requirements in the law are not cost efficient. Some, such as restrictions on adding highway capacity in congested areas, are actually counterproductive, because new capacity can reduce the pollution generated by cars in congested conditions.

While clean air should remain an important cost-efficiency goal of the short-term transportation plans, as described in Proposal 2, it should not be the overriding goal. Nor should Congress prescribe solutions that may not be cost-effective, or effective at all, in cleaning the air.

7. Avoid Earmarks

Congress did not include any earmarks in transportation reauthorization bills until the 1982 bill, which included 10 earmarks. Since then, they have grown exponentially: 152 in 1987, 538 in 1991, 1,850 in 1998, and about 7,000 in 2005.[41] At this rate of exponential growth, the next reauthorization, if passed in 2010, will have nearly 40,000 earmarks!

Some earmarks are clearly not cost efficient because they are not even spent on transportation purposes. For example, about 30 earmarks in the 2005 reauthorization were for visitors' centers in various national parks and other public lands. A few of these were related to transportation, but many were not.

Beyond this, earmarks are almost by definition not cost efficient, because if they were cost efficient, they would be funded by a cost-efficient planning system without the earmark. Some members of Congress may argue that the current transportation planning system is not cost efficient and the earmarks are aimed at overcoming this lack of cost efficiency. But it would be better to make the process cost efficient than to hamper it with even more earmarks.

8. Remove Employee Protective Arrangements from Transit Law

Urban mass transit is the most disappointing performer and least-productive part of the nation's transportation system. Since 1964, when Congress first passed the Urban Mass Transportation Act, transit costs have

risen far faster than either revenues or ridership. This signals a tremendous decline in productivity.

"It's uncommon to find such a rapid productivity decline in any industry," wrote University of California economist Charles Lave in 1994. "If transit productivity had merely remained constant since 1964," Lave wrote, "total operating costs would be more than 40 percent lower" in 1985, the last year for which he had data.[42] By 2006, after adjusting for inflation, operating costs per trip were 2.3 times as much as they were in 1964, while average fares had fallen by 24 percent from 1964.[43] All of this additional cost came out of taxpayers' pockets.

Thanks to this decline in productivity, transit is the most expensive form of travel in the U.S. In 2006, Americans spent about 13 cents per passenger mile flying, 23 cents driving, and 56 cents on Amtrak, but they spent 85 cents per passenger mile for public transit. While users pay nearly all of the costs of flying and driving, and 60 percent of the costs of Amtrak, taxpayers subsidize more than 70 percent of the costs of transit.[44]

One reason for transit's loss in productivity is the lack of any cost-efficiency requirements in federal transit funding. Instead, much of that funding, such as New Starts money, is distributed on a first-come, first-served basis, which actually encourages transit agencies to propose high-cost projects rather than ones that are cost efficient. Proposals 2 and 3, regarding cost efficiency, should fix this problem.

Another reason for the decline in productivity, however, is the "employee protection" requirement in federal transit law.[45] This provision effectively gives transit labor unions the right to veto any federal grants to transit agencies, forcing the agencies to agree to union demands.

For example, one way transit agencies can increase productivity is to contract out transit service to private operators such as First Transit and Stagecoach. For example, Denver contracts out about half of its bus routes and pays contractors only 53 percent as much per bus mile as it spends on its own directly operated routes.[46]

Given this cost advantage, transit agencies that now operate their own routes could almost double service to transit riders, at no additional cost to taxpayers, by contracting out. Despite this, 92 percent of transit riders in 2007 were carried by directly operated services.[47] The reason is that unions object to contracted services because the contracting companies are often nonunion. Most contracting is done in places where transit has not traditionally been unionized, such as Phoenix and Las Vegas. Denver contracts half its service only because the Colorado legislature requires it to do so, a law the unions would like to change.[48]

As a result, while the labor productivity of almost every other industry steadily increases, transit's labor productivity—the number of trips carried per employee—declined by more than 1 percent per year between 1990 and 2006.[49] Cost-efficiency requirements, combined with the repeal of the employee protection requirement, will help the transit industry to reverse this decline.

Conclusion

America's surface transportation network would be extraordinarily improved if only transportation users were able to get what they pay for and asked to pay for what they get. Getting what you pay for ensures that scarce transportation dollars are not spent on facilities that people really do not need. Paying for what you get ensures that the facilities we build are the ones that people will really use.

Achieving these twin goals means making several major changes in the next reauthorization of federal surface transportation programs. One important change is to encourage states to focus on user fees rather than taxes to pay for transportation improvements. A second important change should be to promote the cost-efficient use of transportation resources. Finally, Congress should ensure that these changes are properly implemented by directing the Department of Transportation to create a citizens' enforcement process. Mak-

Thanks to a rapid decline in productivity, urban transit is the most expensive form of travel in the United States.

ing these changes will save taxpayers billions of dollars and lead to a tremendous increase in national wealth and productivity.

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