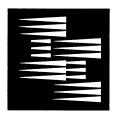
# INDEPENDENCE ISSUE PAPER

Issue Paper #4-97 February 5, 1997

# Light Rail in Denver: Taking the Taxpayers for a Ride

by Stephen R. Mueller and Dennis Polhill Senior Fellows, The Independence Institute



### INDEPENDENCE INSTITUTE

14142 DENVER WEST PARKWAY, SUITE 185 GOLDEN, COLORADO 80401 (303) 279-6536 FAX (303) 279-4176

Note: The Independence Issue Papers are published for educational purposes only, and the authors speak for themselves. Nothing written here is to be construed as necessarily representing the views of the Independence Institute, or as an attempt to influence any election or legislative action.

•

Feb. 5, 1997

### Light Rail in Denver: Taking the Taxpayers for a Ride

by Stephen R. Mueller and Dennis Polhill Senior Fellows, The Independence Institute

#### In Brief:

Congress is considering giving Denver hundreds of millions of dollars to construct an eight mile extension of the existing five mile light rail system. The Regional Transportation District (RTD) is pushing for a vote on a tax increase to fund even more light rail With new EPA air quality standards looming over the city, the battle over the light rail system is about to begin. The facts show that light rail in Denver is a waste of money:

- Light rail requires subsidies forever. Every light rail project in the nation, once funded by the federal government, has requested additional federal funding to provide operating assistance. Refusing to fund new light rail projects will help Congress avoid future additional construction and operating subsidies.
- The costs are too high. Light rail transit is one of the most expensive forms of transportation. Even RTD—the Colorado entity pushing light rail—estimates that light rail in Denver will cost more than twenty million dollars a mile to construct. Other forms of mass transportation systems can carry the same number riders at a much lower cost.
- The benefits are too low. Light rail will not reduce traffic congestion, nor will it improve air quality. In addition, there will be no economic benefit. In fact, there will be a huge net loss to the economy.
- There are better solutions to Denver's transportation needs. The amount of travel done by rail is a fraction of that done by highway vehicles. This situation is not going to change with the construction of light rail. People have increasingly decided to use their personal automobiles over public transportation services. Additional highway improvements, carpool lanes, and buses would be far more beneficial to Denver than light rail.
- The people of Denver have already voted against light rail, rejecting it by a 54 to 46 percent margin.

he debate over light rail transit in Denver is heating up. Congress is considering giving Denver hundreds of millions of dollars to construct an eight-mile extension of the existing five-mile light rail system. Pressure for light rail will increase when the new Environmental Protection Agency air quality standards become specific.

Denver's five-mile light rail demonstration has been operational since October 1994 but there has never been an official analytical review of it. In fact, the Regional Transportation District (RTD) Board of Directors itself is divided in its opinion on the ability of light rail to cost effectively move people in a city with a relative low population density. Compounding the political problems surrounding this project is the simple fact that neither the light rail system nor its funding has never been approved by the voters in the Denver area.

While Washington has offered a small amount of preliminary funding for light rail extension in Denver, a careful examination of the facts suggests that additional light rail funding is unjustifiable.

#### 1. Washington is Broke

The federal government is more than five trillion dollars in debt. Both parties in Congress have publicly stated their intent to eliminate the deficit and return this country to financial health. Why on earth would Congress even consider funding the first phase of a new multi-billion dollar project which is guaranteed to exacerbate the current financial woes of our nation? Every light rail project in the nation, once funded by the federal government, has requested additional federal funding to provide operating assistance and capital expansion programs. This may be a direct result of the fact that the actual average cost per rider of constructing and operating light rail systems have been five times higher than originally anticipated by the operating authority.

The millions of dollars that are currently being requested for the eight-mile Southwest Corridor extension is a drop in the bucket compared to the ultimate funding requests which will make their way to Washington in the future. If the door is opened, billions of dollars will slip through in the future. Do the initials "DIA" ring a bell? Congress simply cannot expect to fund this project (and others like it) and simultaneously eliminate the deficit.

As Shown in Figure 1, there has been unprecedented growth in the federal debt since World War II. The debt exceeded five trillion dollars in April 1996 —and is continuing to grow at nearly a billion dollars a day. By the end of President Clinton's first term, the debt reached nearly \$5.7 Billion.

The future of the nation's children depends upon Congress' ability to restore fiscal sanity to the federal bureaucracy. In broad terms, the current public debt is about twenty thousand dollars for every man, woman, and child in the country. This debt is already equivalent to the cost of a mid-sized automobile for each person, or a home that is free and

clear of all debt for the average family. By the time today's young children are in their forties, if Congress continues to allow the debt to increase, it will be equivalent to a house for each person. How will America be able to afford repayment of such a massive loan, or even servicing the debt? It would be considerably better to stop adding to their governmental financial burden now than to authorize the construction of a transportation system that will be of little use in the future to America's young people but will certainly add to their financial burden.

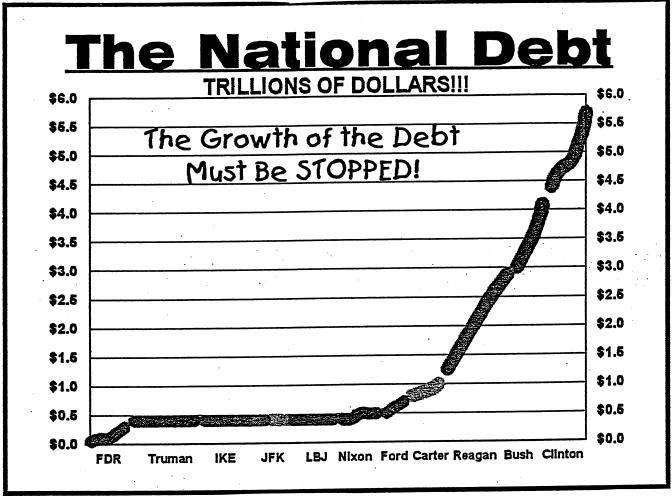


Figure 1: The Growth of the National Debt

The Congress is searching for programs that can be cut with minimal impacts. Not funding new light rail projects will help Congress avoid additional construction and operating subsidies in the future. In other words, if Congress does not fund it now, Congress will not have to try to cut it in the future. As shown later in this paper, less than five percent of Denver residents regularly use mass transit. Even fewer would use light rail. Does Congress really believe that it has the money to fund this boondoggle, and that this country will truly

### 2. Support for Denver's Light Rail Project is Counter to the Principles of Limited Government.

If Congress intervenes in Denver by giving "free money" for light rail, it will be rewarding an organization that most people in Denver consider to be a failure, and it will be "growing" this ineffectual agency into Colorado's second largest governmental jurisdiction.

In 1995, the Regional Transportation District was a \$300 million dollar a year operation. This made it one of the five largest governmental jurisdictions in the State of Colorado, yet—according to the Census Bureau—it regularly served less than five percent of the population of Denver. While the transit union heaps praise on RTD as being one of the best transit agencies in the country, the public barely rides. The joke in Denver is that "RTD" means "Reason To Drive."

If Congress helps RTD to expand its governmental tentacles through additional federal funding for light rail, will the expansion increase mass transit ridership? No. In every other city that constructed light rail in the decade from 1980-1990, total mass transit ridership has actually *declined* after the light rail began operations. In Los Angeles, the government has spent \$3 billion on mass transit, only to have ridership decline twenty percent since 1985. Based on this information alone, Congress should look very skeptically at funding for all new light rail projects.

Figure 2 lists the cities where light rail systems were constructed in the 1980s, and the subsequent decline in mass transit ridership in those cities. In contrast, Phoenix and Houston turned down light rail funds from the federal government, used their own resources for more rider-friendly transit improvements, and the market-share of commuters using those cities mass transit systems increased.

Many otherwise fiscally responsible legislators in Denver and the surrounding cities are supporting this project in order to "bring home the bacon" and to appear more environmentally friendly. The argument is that if Denver does not get the federal money, some other city will. The additional tax and debt burden—both local and national—that will result from the construction of this project should be carefully considered.

Since 1964, Congress, state, and local governments have poured 310 billion dollars into mass transit subsidies—close to the total cost of the entire interstate highway system. Yet these mass transit systems, including light rail, have frequently been designed to meet

political needs rather than commuter needs. Thus, the percentage of people using mass transit has actually decreased after this massive capital investment.

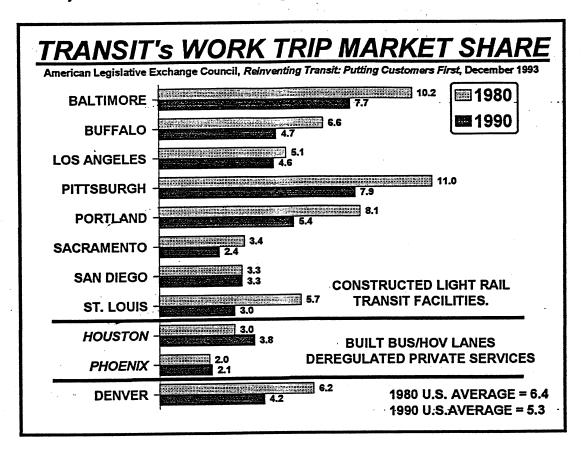


Figure 2: Declining Mass Transit Ridership in Cities with New Light Rail Systems.

Congress should not be surprised at the poor results of these failed big-government policies. A centralized, fixed-guideway mass transit system cannot possibly meet the disparate transportation needs of the citizens. Fixed routes cannot work unless we return society to the days of tenement housing and assembly lines. Fixed route scheduling is inconvenient or impossible for most people in today's quickly changing lifestyles. Light rail's failures mirror the poor results which have occurred in virtually every other sector of the economy where centralized solutions were forced upon society.

In addition, there is the constitutional question. Where in the Constitution does it say that the federal government has authority to be involved in public transportation within the borders of a single state?

The answer, of course, is that article I, section 8 of the Constitution gives Congress eighteen specific powers, and none other. Any act by Congress which is not authorized by

one of the eighteen grants of power in article I is simply a usurpation of power, and the exercise of authority not granted. None of the article I powers gives Congress authority over surface transportation, including mass transit.

Some persons argue that the spending power which is granted to Congress allows Congress to spend money for any purpose, even if that purpose is not related to legitimate Congressional powers. President James Monroe confronted this argument in 1822, when Congress passed the Cumberland Road Bill, to establish a national toll road through Maryland, the District of Columbia, and Virginia. President Monroe vetoed the bill, and his veto message became one of the classic veto messages of all time:

Having duly considered the bill entitled "An act for the preservation and repair of the Cumberland road," it is with deep regret, approving as I do the police, that I am compelled to object to its passage and to return the bill to the House of Representatives, in which it originated, under a conviction that Congress do not possess the power under the Constitution to pass such a law.

If the power exist, it must be either because it has been specifically granted to the United States or that it is incidental to some other power which has been specifically granted. If we examine the specific grants of power we do not find it among them, nor is it incidental to any power which has been specifically granted...

President Monroe continued, examining each purported constitutional basis for the Cumberland Road, and finding it deficient. Congress did not override his veto. He further explained that the spending power must only be used for purposes of national, not local, benefit. (Of course a light rail system in Denver is at best a local benefit, not even a state benefit.)

The Monroe veto's intellectual force stood as a powerful barrier to unlimited federal transportation spending until the 1950s. Then, congressional spenders, playing off Monroe's statement that the spending power could be used "for the purposes of the common defense," passed a massive highway spending bill by calling it a "National Defense" act. Whatever merit the national defense pretext may have had in the 1950s (such as allowing faster movement of the U.S. Army along interstate highways), no one in the 1990s has had the audacity to claim that light rail in Denver has a genuine relation to national defense.

Persons who want to spend federal money for local transportation in Denver or elsewhere would be well-advised to follow President Monroe's advice, and seek a constitutional amendment, rather than to subvert the Constitution.

In the 1990s as in the 1790s, the Constitution's limits on congressional spending promote good government. Federal involvement with "free money" distorts decision making. In a system where "free money" exists, local agencies compete aggressively for the "pork." If there were no "free money," then policy options and service delivery options would be forced to compete with each other on the basis of costs and benefits. In a competitive environment at the state and local level, the high costs and the low benefits of light rail systems would mean an immediate end to these irrational projects. Few issues provide such an impressive opportunity to demonstrate the value of devolution. Devolving transportation to the states will yield better and more efficient policy.

#### 3. The Costs are Too High

Rail systems have historically provided a cost-effective transportation network for the movement of goods throughout the nation, but rail systems are an expensive form of transportation for the movement of people. Heavy rail systems for use by people (e.g.: Amtrak) require massive federal subsidies. Light rail is more expensive and requires higher subsidies. That's why it feeds off the public sector instead of the private sector. In fact, light rail transit is one of the most expensive forms of transportation on a cost per mile basis. In Denver, it will cost more than twenty million dollars a mile to construct, according to the RTD projections. Many alternative forms of mass transportation systems can carry the same number of riders for considerably lower cost.

Figure 3 contains the capital construction cost information for the four alternatives considered by RTD in their 1994 Alternatives Analysis. The Independence Institute took a critical look at that document, and published a paper entitled "Stop That Train! RTD's Light Rail Boondoggle is on a Fast Track for Disaster." In the time since the Alternatives Analysis was published and approved, RTD has admitted that their original cost projection for the light rail alternative failed to include nearly \$67 million dollars in additional costs. Figure 3, therefore, has been updated to include the additional costs which were omitted from the 1994 Alternative Analysis. Congress should require an independent review of this information prior to approving additional funds for this project.

RTD's 1995 Budget was approximately \$300 million dollars. There are currently two million residents of Denver area. Every man, woman, and child in Denver paid an average of \$150 dollars per year (\$300 million/2 million = \$150) for bus and light rail service. A family of four, therefore, would have paid nearly \$600 for the privilege of having access to public transportation services in the Denver area. Few families in Denver would testify that they got their money's worth from RTD last year. Why would Congress want to add to this tax burden? How much should the 95 percent who never use mass transit be taxed? Should the residents of Denver pay \$750 per family per year? \$1,000?

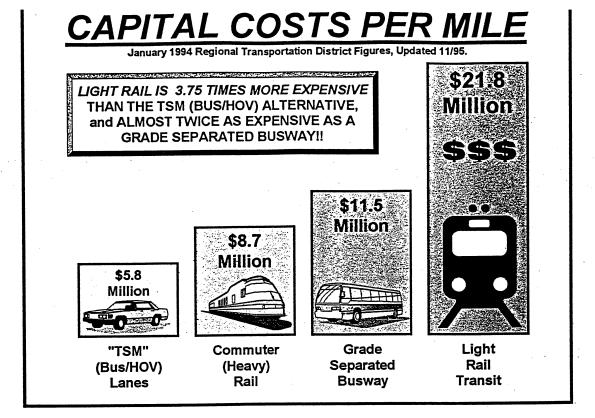


Figure 3: Capital Costs Per Mile for RTD's Southwest Corridor

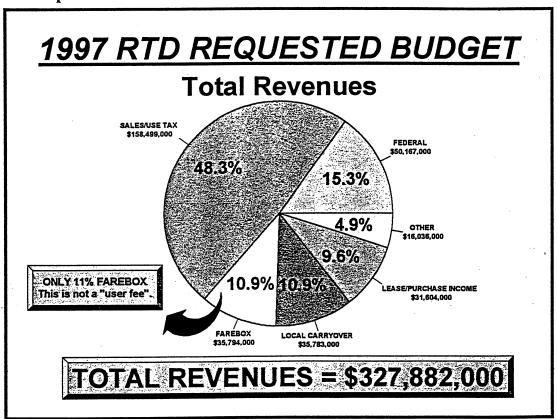


Figure 4: Current Taxpayer Costs for RTD

The proponents of light rail often do not inform citizens that local taxpayers have to pick up most of the operating costs for light rail systems, even if the capital construction is financed by the federal government. In Denver, it is doubtful that taxpayers would agree to provide additional funding for RTD. They have never approved the construction or financing of light rail, yet the bureaucrats are going "full steam ahead" in support of the system. Figure 5 is a chart showing the extent of local subsidies required to operate the light rail systems constructed in the 1980s.

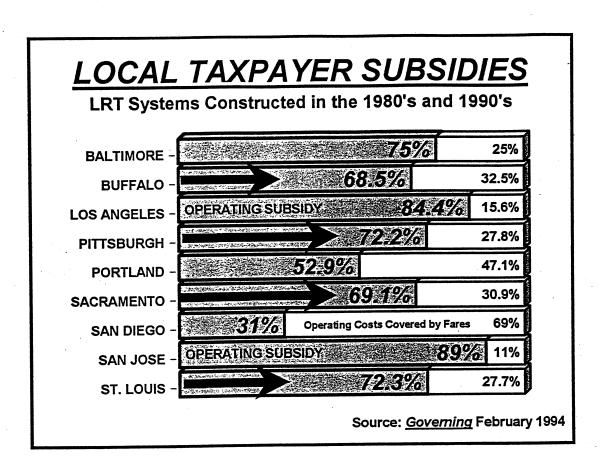


Figure 5: Local Taxpayer Subsidies For Light Rail

Since the RTD's Alternative Analysis (AA) for the Southwest Corridor was completed, many new facts concerning this project have come to light. The light rail proponents who control the bureaucracy at RTD acknowledge the relevance of these facts, but refuse to reanalyze the situation for fear that another solution other than light rail would result. They rely on the AA, with its many errors and omissions, as the foundation that the

light rail is the best solution. Congress should mandate a reanalysis of the corridor based upon current costs and conditions—particularly the existence of the High Occupancy Vehicle (HOV) lanes on Santa Fe Drive, which parallels the proposed light rail line. Analysis of HOV lanes was omitted from the original AA.

How should the public measure the success of a mass transit system? System-wide ridership, and the ability of the system to capture a share of the transportation market is one appropriate measure. The High Occupancy Vehicle (HOV) lane construction projects in Houston and Phoenix are the only two examples of mass transit systems which were constructed from 1980-1990 where the market share of riders using mass transit actually increased after the project was completed. Using this measure, the HOV lanes were the only

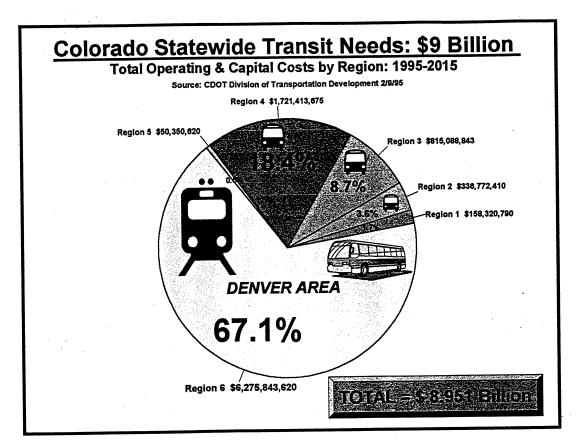


Figure 6: The Colorado Department of Transportation's Statewide Transit Needs

successful mass transit projects in the United States. Cities in which light rail was implemented using federal dollars universally lost riders. This is "Field of Dreams" in reverse: the 1954-1994 Congresses paid tens of billions of dollars to build light rail systems, but no one came to ride.

The Colorado Department of Transportation is expecting nearly nine billion dollars in transit construction and operating funding requests in the next twenty years. Most of these projects are listed as "high priority" projects in the State Transportation Improvement Plan, shown in figure 6. More than two thirds of these expenditures are projected to be for the Denver area—a total of more than \$6.2 billion These figures confirmed all suspicions that the Southwest Corridor was just a drop in the bucket compared to the ultimate bureaucratic plans of light rail supporters. Can Congress really embark upon a plan to give Colorado \$9 billion or more during the next 20 years?

#### 4. The Benefits are Too Low

Research by the Independence Institute has shown that there will be virtually no benefits to the public if the light rail system is constructed in the Southwest Corridor.

#### **No Reductions in Traffic Congestion**

The light rail extension will only carry 1,400 passengers per hour. A single freeway lane carries more than 2,000 vehicles per hour at capacity! In 1993, CDOT measured a maximum actual traffic flow on South Santa Fe Drive of 1,350 vehicles per hour. This low number was obtained prior to the construction of the highway improvements along the corridor. The new highway improvements will greatly enhance the vehicle flow rate, but the obsolete numbers were used by RTD in the Alternatives Analysis. This is one example of how the truth has been bent by RTD to show light rail in a more favorable light. Simply put, if Congress wants to solve traffic congestion, it should build more roads—not light rail.

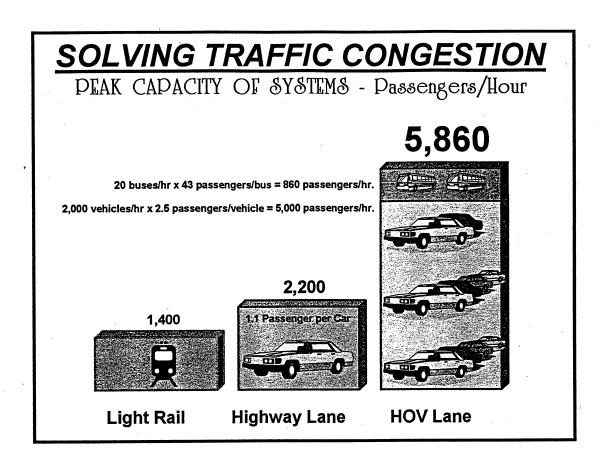


Figure 7: Light Rail Doesn't Reduce Traffic Congestion

#### No Air Quality Improvement

There are two million people in Denver. The proposed light rail will only carry about 20,000 passenger a day—most of whom (about 90%) already ride buses. This is not enough people to have a measurable impact on air quality

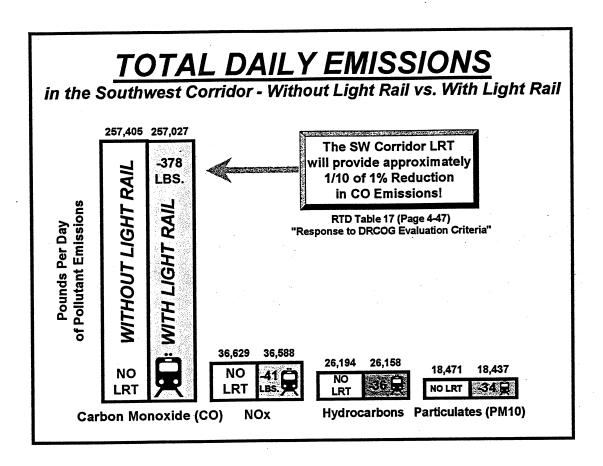


Figure 8: Air Pollution in the Southwest Corridor With and Without Light Rail

#### No Economic Benefit

There will be no economic benefit to the Denver metropolitan area as a result of the construction of a light rail system. In fact, there will be a huge net loss to the economy. The capital and operating costs of a transportation system that moves so few people will require substantial tax subsidies. The level of taxation will far outweigh the limited economic benefits at the locations of the stations. The only people that stand to benefit from this project are the consultants, contractors, and government employees involved in the project. A few gain a lot, the rest of Denver loses.

## 5. There Are Better Solutions to Denver's Transportation Needs

There is a great myth surrounding the ability of rail transportation systems to move people. People have been falsely led to believe that rail transportation systems move the majority of people in Eastern seaboard cities, and that rail provides a much stronger alternative to the automobile than it really does. The following chart shows the daily number of passenger rail miles traveled in comparison to the number of vehicle miles traveled in each of the thirty-three cities of more than a million people in the United States. Clearly, the amount of travel done by rail is a fraction of that done by highway vehicles. Rail systems are not the savior of the East, or of the West.

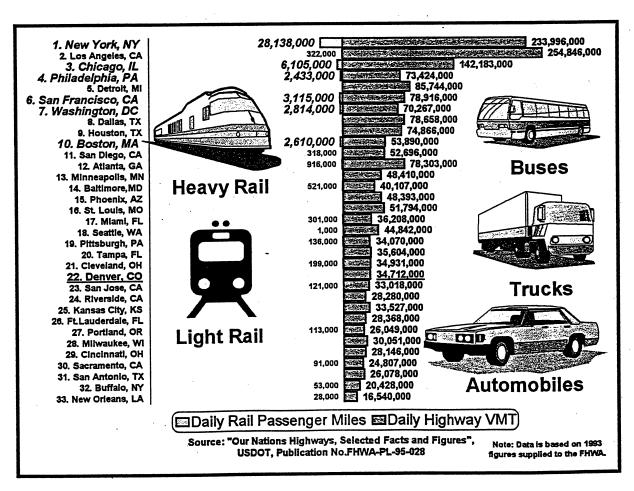


Figure 9: Rail Carries Relatively Few Passengers in Large American Cities

Regardless of the number of people carried by the transportation network, it is the personal benefit derived by the individual consumer that drives the decision to utilize a mass transit system. On an individual level, people have increasingly decided to utilize their personal automobiles over government subsidized transportation services. People apparently enjoy the convenience, flexibility, safety, comfort, and economy provided to them by their own cars. Figure 10 shows the decline in mass transit usage and the increase in the use of the personal automobile between 1980 and 1990.

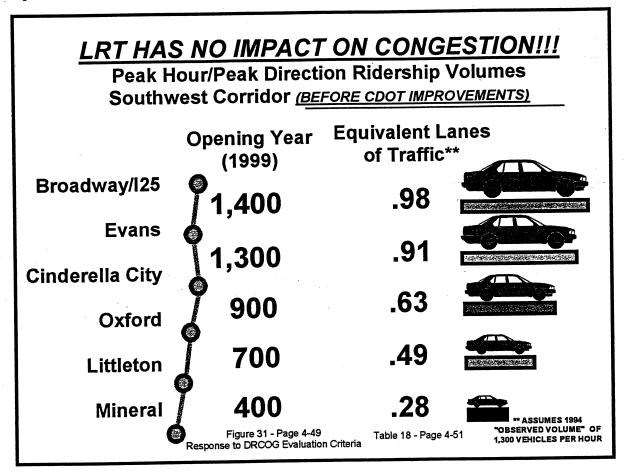


Figure 10: Mass Transits Hölds a Small and Declining Market Share of Commuters in Denver.

Congress should be aware that although several federal agencies have recently issued opinions that the corridor has met all of the requirements of the current funding qualification process, these same agencies have historically denied funding RTD's requests for similar projects in the Denver area. Simply put, previous analyses have shown that there are more cost effective ways to move people in the Denver area.

## 6. The People of Denver Have Never Voted In Favor of Light Rail

There has never been a vote by the people of Denver to approve this project, but biggovernment planners have shrewdly forwarded this project through the required federal paperwork processes. The people of Denver, however, will ultimately have to pay for this boondoggle if the Congress starts granting money. Congress has received some testimony that the people of Denver support light rail, but none of the polls that have been conducted have truthfully presented the costs of the system. Most people in Denver would say that they would like to own a Dodge Viper—especially if the federal government gave them one for free—but at the same time most people recognize that they simply cannot afford one.

In any case, the more important gauge of public opinion in Colorado is how all the people vote at the polls, not what a few people tell pollsters. In 1980, the people of Denver voted 54 to 46 against giving the Regional Transportation District authority over light rail, and raising taxes for light rail. Undaunted by rejection from the voters, the RTD Board majority pursues federal light rail funding, thereby incurring millions of dollars of future obligations for light rail operating costs. Congressional funding for light rail in Denver is an arrogant rejection of the directly—expressed wishes of the voters of Denver.

#### Conclusion

The federal government has spent tens of billions of dollars on light rail, but the nationwide ridership levels on mass transit systems has declined. The only thing that has expanded is the system of government bureaucracies administering these federal dollars. If the Congress wants to help Denver improve transportation of people and goods, then Congress should assist Denver with additional highway improvements and carpool lanes. Better yet, Congress should respect the Constitution, and get out of the business of transit funding.  $\blacksquare$ 

#### Copyright © 1997 — Independence Institute

INDEPENDENCE INSTITUTE is a nonprofit, nonpartisan Colorado think tank. Its public policy focuses on economic growth, education reform, local government effectiveness, and criminal justice.

PERMISSION TO REPRINT this paper in whole or in part is hereby granted, provided full credit is given to the Independence Institute.

DENNIS POLHILL is the Independence Institute's Senior Fellow in Public Infrastructure. He is a former City Engineer and Director of Public Works, and a Past President of Colorado Chapter of the American Public Works Association. He is a registered Professional Engineer in twelve states, and holds a Masters Degree in Public Works Management and Civil Engineering.

STEPHEN MUELLER is the Independence Institute's Senior Fellow in Transportation. He is a Past President of the Colorado Society of Engineers. In 1993 he was named "Engineer of the Year" by the Colorado chapter of the American Public Works Association. He holds a Masters Degree in Public Administration, and is a registered Professional Engineer.

DAVID B. KOPEL is Research Director at the Independence Institute, and editor of this paper.

## Other Independence Institute studies on Transportation

- ♦ No. 2-94. Stop that Train. By Dennis Polhill and Steve Mueller. The economics of light rail in Denver
- ♦ No. 5-94. *Stop that Train Part II*. By Dennis Polhill and Steve Mueller. Commendably, the Regional Transportation wrote a point-by-point to the Issue Paper 2-94, dealing with light rail. This Issue Paper answers the RTD reply.
- ♦ No. 6-94. *Quotas at Denver International Airport*. By Barry Poulson. How quotas led to major delays and large cost overruns.
- ♦ Colorado in the Balance. The Independence Institute's comprehensive book of policy solutions for Colorado includes a lengthy chapter on transportation and infrastructure. Topics include transportation finance, air quality, highway policy, the Colorado Department of Transporation, overweight trucks, and mass transit.

Most of these papers are available from the Independence Institute website, at <a href="http://i2i.org">http://i2i.org</a>. All are available by contacting the Independence Institute, at the address on the cover of this publication. The papers are \$8.00 for a hard copy (\$15 for *Colorado in the Balance*), or free at the website.



### Independence Institute

#### Recent Publications

(All Publications \$8 unless otherwise noted)

Colorado in the Balance - A 300-page road map for Colorado's future with over 87 recommendations for change. Available from the Institute for \$15 (price includes shipping.)

#### **■** Economic Growth

- 1-95 The One Percent Solution to the Federal Debt
- 8-95 Give the Taxpayers a Lobbying Break
- 4-95 Utilities: Market Competition is Coming
- 10-94 Montana Tax & Spending
- 19-93 The Tourism Tax
- 16-93 Unfair Government Competition with Small Business

#### **■** Education

- 6-96 Jefferson County's "Content Standards"
- 3-96 Outcome Based Education
- 2-96 Why Colorado Should Drop Out of Goals 2000
- 1-96 End Compulsory Education
- 9-95 How Much More/Money Do We Have to Spend to Achieve a Totally Illiterate Society?
- 11-94 Guide to the Great Reading Controversy
- 1-94 The ABCs of  $\phi$ BE (Outcome Based Ed.)
- 24-93 Jeffco Students Falling Behind
- 18-93 Education Contracting
- 11-93 Charter Schools
- 19-92 Polly Williams Reports on Vouchers in Milwaukee
- 18-92 Fiscal Impact of Vouchers

#### Firearms Research Project

- 21-93 Gun/Waiting Periods (\$12)
- 14-93 Concealed Carry Reform (\$12)
- 11-93 (Children and Guns': Sensible Solutions (\$12)
- 5-93 /Federal Gun Traces Don't Reflect Street Crime

#### Books:

- "The Samurai, The Mountie and The Cowboy" by
  David Kopel (28.95 + 4.00 Shipping and
  Handling)
- "Guns, Who Should Have Them?" by David Kopel (24.95 + 4.00 Shipping and Handling)
- "Things You Can Do to Defend Your Gun Rights" and
- "More Things You Can Do to Defend Your Gun Rights" by Gottlieb and Kopel (9.95 each)

#### ■ Immigration

5-95 Compassion or Compulsion:
The Immigration Debate and Proposition 187

#### Environment and Natural Resources

- 7-94 Philippine Eagle
- 8-93 Mandates Are Wrong Way to Promote Recycling
- SRR-1 Cities Should Do Their Part in Superfund Cleanup

#### ■ Health Care Reform

- 23-93 Six Myths About Health Care
- 22-93 ColoradoCare: Cure Worse than the Disease?
- 4-93 How to Think About Health Care Reform
- 1-93 A Medicaid Voucher Proposal for the States
- 4-92 Fighting Cancer in Comfort; The Wealth of the American Cancer Society

#### ■ Effective Institutions

- 7-96 Stop Public Subsidies to Private Corporations
- 5-96 Initiative Process in Colorado
- 4-96 \ Unneeded Laws
- 2-95 The \$75,000-A-Year Orphan (Welfare Reform)
- 1-95 How to Start Reducing the National Debt
- 8-94 Lowry AFB Closure
- 6-94 Quotas at DIA
- 5-94 Stop that Train Part II (Light Rail)
- 2-94 Stop that Train
- 16-93 Privatizing Airport Transportation
- 6-93 The Case for Taxi Deregulation in Denver

#### ■ Culture in Crisis Video Series

- (All Videos \$10 unless otherwise noted)
- 4-94 Linda Chavez Toward a New Politics of Hispanic Assimilation
- 3-94 John Taylor Gatto The Exhausted School
- 2-94 Marshall Fritz Separation of School and State
- 1-94 Mayor Bret Schundler Dynamic new mayor explains how he is reinventing government in Jersey City.

To order publications or enter your membership contact the Independence Institute, 14142 Denver West Pkwy, Ste 185, Golden, CO 80401. (303) 279-6536. fax (303) 279-4176. VISA/MC/AMEX accepted.