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Foreword

Get out there and ride.

Tune up the brakes, pump up the tires, strap on the helmet — repeat, strap on the helmet — and *ride*.

Take a friend. Take a spouse. Take the kids, if you've got 'em. Or why not park the car and pedal to work for a change, or to run an errand. Chances are you can do it. After all, more than 40 percent of the trips Americans take by car are less than 2 miles in length. You'll feel better. You'll feel healthier. You might even feel younger. You'll strike a blow against air pollution. And if you're lucky enough to ride a bike of recent vintage — made in the last five years or so — prepare yourself for the stunning improvements in handling, shifting, braking and comfort that technological developments have brought to even the most affordable modern bikes.

But is it *safe*, you ask? In too many American communities it's not just a fair question, it's a necessary one. And the answer comes in two parts. It'll be safer if you ride by the rules of the road that bicycle advocacy

groups and good local bike shops advise. (You learned rules to drive a car safely, right?) And it will be a lot safer if Congress acts this year to direct more funding to ensure that America's fledgling network of bike-friendly routes continues to grow in the years ahead.

That's what this report is about: making the case on public health, economic, and environmental grounds for a fair share of funding to make America bicycle friendly. We found that between 1986 and 1995, a total of 8,040 bicyclists were killed by cars, averaging 840 per year. About half of those fatalities involved kids under the age of 18, some 77 percent of whom are killed while riding on streets in their neighborhoods. Another 75,000 bicyclists are injured by motor vehicles each year — more than 200 per day.

Is part of the problem a lapse in personal responsibility? Sure. But a big part is the lack of basic accommodations for bicycles in the U.S. transportation system.

In *Share the Road*, Environmental Working Group researchers analyzed computer records of

federal highway spending and found that, under the progressive federal “highway bill” passed by Congress in 1991 (known as the Intermodal Surface Transportation Efficiency Act, or ISTEA), more than 3,400 bicycle projects have been funded, to the tune of just over \$1 billion. Quite an improvement from the pittance of federal funds spent accommodating bicycle transportation in the decades preceding. So if you’ve enjoyed (or even admired) the safety and sanity of a bike-lane along a road, a community bike path, or provisions for transporting your bike on a bus or securing it at your destination, you may well be admiring the results of ISTEA funding that bike advocates nationwide fought for and won in 1991. Ten million more Americans are riding bikes today than rode 6 years ago, and it’s hard not to think that ISTEA’s bike projects are inspiring more pedaling.

Consider this: as it is, about 5 million Americans commute to work by bike, but 21 million (17 percent of all workers) say they’d bike to work, at least occasionally, with adequate bike accommodations providing bike safe routes.

In the next few months Congress will decide how America will spend more than \$150 billion in federal highway trust fund monies, derived from the excise tax you pay at the gas pump. And once again, bicycle advocates are fighting for a share of those funds.

The bible of competitive cycling, *Velo News*, put the proposition this way in a recent editorial:

“In traffic, a cyclist depends on the skill, courtesy and awareness of automobile drivers. For many, the risks are just too big to take. Once constructed, bicycle paths or bike-only lanes encourage more and more ridership, especially for those short sub-five-mile errands and commutes.

“Cyclists are not asking for a handout. Most own cars and, therefore, pay the same taxes and add to pollution and congestion just like other automobile owners. Cycling, however, provides a low-cost means to mitigate those problems.”

Here with an opposing view is William D. Fay, president and CEO of the American Highway Users Alliance — the big-bucks coalition of car companies, oil interests, trucking firms and road builders who want to return to the six-lane, cement-pouring heyday of “highways only” transportation policy:

“The highway funding landscape is obstructed by nonhighway diversions... littered with unaffordable luxuries promoting bicycle riding and historic preservation.”

Litter indeed.

In a previous report on transportation policy (*Mean Streets*, April 1997), a collaboration with the Surface Transportation Policy Project, we documented the fact that one out of seven traffic-related fatalities involved pedestrians over the past decade — an average of more than 6,000 people per year. Another 110,000 walkers are injured each year, xxx percent seriously. Without question part of the problem is failure of personal responsibility on the part of drivers, walkers or both. But the design of cities and communities around automobiles, to the neglect of pedestrians, is also a major —and eminently solvable — problem. Cities born in the automobile age often turned up in our study as among the riskiest places to travel about on foot. Where plans, policies and investments have been made explicitly to make streets safer for pedestrians, lives have been saved and injuries prevented. In a word, public health has been served. So it is with bicycling and bicyclists.

Some bicycle advocates and some bike companies worry that bicycling itself might be discouraged if the media spotlight focuses on the bike riders who are killed by cars each year and those who are injured. They have every right to those concerns, of course, and we share them. Yet it is precisely the very real fear of injury or death in traffic that is keeping too many people off their bikes now, especially for commuting and running errands. The fact is that bicycle fatalities and injuries from traffic accidents constitute a serious public health problem that deserves far more attention than it has received to date from politicians. There are remedies, and ISTEA is the opportunity to implement them.

Bicycle advocates and advocacy groups, with welcome support from bike companies, are standing up to fight against the “highways only” campaign of the Road Gang. We’re convinced that the bike-friendly message will prevail if more people hear it. *Share the Road* says it loud—and clear.

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Executive Summary

We all remember the thrill of riding our first bicycle as a child, and the new freedom it gave us. This year, more than 100 million Americans will go for a bicycle ride, and continue to enjoy the thrill as they pedal along with their families, commute to work on bicycles, or just ride around town. Each year, more Americans take to the road on bicycles than ever before. Ten million more Americans ride bicycles today than rode in 1991 — a ten percent increase in just the past six years. Five million workers ride their bicycles to work — and 20 million more say they would if there were adequate bicycle facilities available.

Much of this increase is due to the Intermodal Surface Transportation Efficiency Act (ISTEA), the landmark transportation law passed by Congress in 1991. In the 18 years *before* ISTEA was passed, a total of \$40 million was spent on bicycle projects — just over \$2 million per year. Since ISTEA, the annual federal commitment to bicycles has increased one hundred fold (Figure 1). The Environmental Working Group's analysis of Federal Highway Administration (FHWA) records reveals that since 1991,

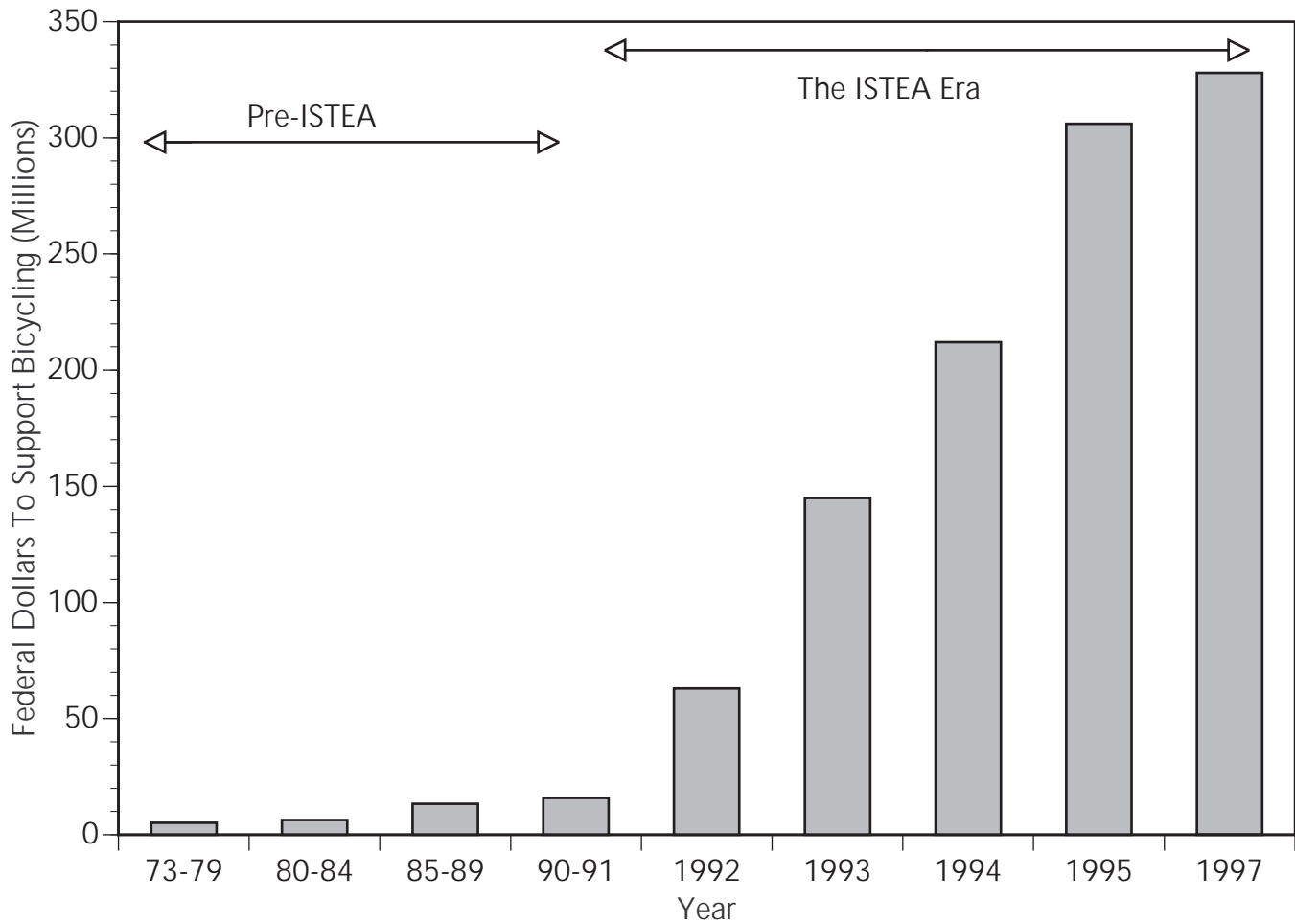
over one billion dollars have been spent in our communities to make bicycling more accessible and safer. Over 3,000 bicycle projects have been funded in all fifty states, and hundreds of miles of bicycle lanes and trails have been built.

Thanks to ISTEA, the United States is on the verge of an explosion of bicycle ridership. A recent poll found that two out of three voters support the use of federal funds to build better bicycle facilities. Yet now, as Congress prepares to reauthorize ISTEA, this substantial progress is endangered. Several proposals sponsored by powerful members of Congress could reduce or even eliminate ISTEA's dedicated funding for bicycle programs. As our study indicates, these proposals would halt the progress we have made towards making our communities more bicycle friendly, and prevent us from stopping hundreds of unnecessary bicycle fatalities each year.

The "Road Gang's" Proposals Threaten To End Support For Bicycles

Some proposals before Congress would reverse our nation's transportation policy and return us

Figure 1. ISTEA has dramatically increased the amount of federal money available to support bicycling. New congressional proposals put bicycle funding at risk.



Source: Source: Environmental Working Group. Compiled from FHWA data. 1973-1991 data from Rails-to-Trails Conservancy.

to the highways-only days by eliminating many of the gains made when ISTEA was passed in 1991. These proposals would make our communities less safe for bicyclists by gutting provisions of ISTEA known as the Transportation Enhancements and Congestion Mitigation and Air Quality Improvement programs. Most of these proposals are supported by the “Road Gang”, a collection of lobbyists for the highway, oil, and automobile industries, as well as many state Departments of Transportation. These proposals include:

- A proposal by Rep. Bud Shuster (R-PA), chair of the House Transportation and Infrastructure Committee, would allow the state Departments of Transportation to transfer 50 percent of the money for bicycle facilities and use it to build more highways or other programs instead, almost certainly returning transportation policy to the pre-ISTEA days when little money was spent on bicycle use and bicycle safety (BNA 1997).

- A proposal known as “STEP-21,” introduced in the House by Tom DeLay (R-TX) would gut the ISTEA law by turning the entire program into a federal block grant — essentially eliminating the dedicated Transportation Enhancements and Congestion Mitigation and Air Quality Improvement (CMAQ) programs that have provided over \$1 billion for bicycles since 1991.
- “STARS-2000,” legislation introduced by Sen. Max Baucus (D-MT) would also reshape ISTEA and reduce funding for bicycle-safe streets. In addition, this legislation would cut funding for the Congestion Mitigation and Air Quality Improvement Program by almost two thirds, from \$1 billion per year to \$387 million per year.

Congress Should Increase Support for Bicycling in ISTEA

Slowly but surely, the landmark changes embodied in ISTEA are making communities more bicycle friendly. In addition to dedicated funding for bicycles, ISTEA requires the appointment of a bicycle and pedestrian coordinator in every state, the routine inclusion of bicycle plans in state and local transportation plans, and encourages public involvement in the development of these plans.

As a result, ISTEA has increased public involvement in bicycle safety and bicycle-friendly community design, through a planning process that was non-existent before the law’s passage.

Although ISTEA’s new planning requirements and funding programs have only been in existence for five years, hundreds of miles of bicycle lanes and trails have already been added to our communities. These facilities are almost certainly a factor in the increased number of people riding bicycles. But there is still a lot of room for improvement. Indeed, with some modest improvements to ISTEA to expand the development of safer communities hundreds of lives could be saved. Our analysis indicates that preserving and strengthening the pro-bicycling features of ISTEA can encourage more bicycle use and make bicycling even safer. We found that:

- Between 1986 and 1995, an average of 840 bicyclists annually were struck and killed by motor vehicles. And for every bicyclist killed by a car, another 88 suffer injuries — for a total of 75,000 bicyclists injured by cars each year.
- More than two thirds (68 percent) of all bicyclists killed by cars are killed in their neighborhoods, on local roads, collectors streets, and minor arterials.
- Each day (on average) a child on a bicycle is killed by

an automobile. Almost half — 47 percent — of all bicycle fatalities involved children under the age of 18 — an average of 399 fatalities a year.

- Many children are also injured; for every child on a bicycle who is killed by a car another 100 are injured, for a total of 38,500 children injured by cars while bicycling each year.

These data serve as indicators of the work that needs to be done, and of the vast benefits that will be achieved when our roads are made safer for bicycling. Some may be tempted to look at these data and jump to the conclusion that they — and their children — should stay off of bicycles because of safety concerns. This would be a mistake. Bicycling remains an activity that is good for our children, our health, and our communities. The real goals are to make bicycling more accessible *and* safer. The city of Davis, California provides an example of how this can be done. Davis began considering bicycle use and bicycle safety years before ISTEA was passed in 1991. The city has built many miles of bicycle trails and lanes, implemented education and enforcement campaigns, and aggressively acted to reduce risks. As a result, more than 20 percent of trips in Davis are made by bicycle (many times higher than the national average), and children ride everywhere. Over the past ten years,

no one has been killed in Davis California while riding a bicycle, proof that increased ridership and increase safety can go hand in hand.

Our analysis of federal highway spending records show that in 27 states and the District of Columbia, less than one percent of all federal transportation dollars were spent on bicycle related projects (Table 1). Only four states spent more than two percent. We need to preserve and strengthen ISTEA to help communities accommodate and encourage bicycling while reducing the current risks.

Where Are Bicycle Fatality Rates The Highest?

The national average bicycle fatality rate¹ between 1986 and 1995 was 3.4 bicyclists per million individuals. In Florida, which had the highest bicycle fatality rate, this rate was more than twice as high - 8.8 bicyclists killed per million. After Florida, the five states with the highest fatality rates were Arizona (7.0), Louisiana (5.9), South Carolina (5.4), and North Carolina (4.5) (Table 2).

Among large metropolitan areas², Tampa-St. Petersburg-Clearwater, Florida had the highest per capita bicyclist fatality rate — 9.3 bicyclists per million. Other large metropolitan areas with bicycle fatality rates more than twice the national average included Miami-Hialeah (7.7), Phoenix (7.7), Fort Lauderdale-

Table 1. Florida, Arizona, and Louisiana have the highest bicycle fatality rates.

State	Annual number of bicyclists killed by cars (1986-1995)	Average annual # of children killed on bikes by cars (1986-1995)	Fatality rate per million (bicyclists killed by cars)	Child bicyclist fatality rate per million (bicyclists killed by cars)
Florida	114	34	8.8	11.2
Arizona	26	9	7.0	9.0
Louisiana	25	12	5.9	9.6
South Carolina	19	9	5.4	9.6
North Carolina	30	15	4.5	8.7
Utah	7	5	4.2	7.6
Nevada	5	2.2	4.2	7.1
California	123	42	4.1	5.2
Oregon	12	5	4.0	6.0
Montana	3	1.8	4.0	7.7
Delaware	3	1.3	3.9	7.5
Michigan	34	21	3.7	8.2
New Mexico	6	3	3.6	5.3
Hawaii	4	1.3	3.5	4.4
Colorado	11	5	3.3	5.3
Mississippi	9	5	3.3	6.3
Texas	56	26	3.3	5.2
Idaho	3	3	3.3	9.0
Alaska	1.8	0.8	3.3	4.5
Indiana	17	9	3.1	6.1
Georgia	20	12	3.1	6.4
New York	52	24	2.9	5.4
New Jersey	22	12	2.9	6.5
Iowa	8	4	2.8	5.4
Wisconsin	13	8	2.7	5.5
Vermont	1.5	0.5	2.7	3.3
Illinois	30	16	2.7	5.3
Virginia	16	7	2.6	4.2
Alabama	11	7	2.6	6.3
Minnesota	11	6	2.5	5.0
Ohio	26	16	2.4	5.5
Arkansas	6	4	2.3	5.3
Connecticut	8	4	2.3	5.4
Washington	11	7	2.3	5.0
Maine	3	1.6	2.3	4.9
Maryland	11	6	2.2	4.6
Tennessee	11	7	2.2	5.4
Kentucky	8	6	2.2	5.5
South Dakota	1.5	0.8	2.2	3.8
Pennsylvania	25	15	2.1	5.2
Nebraska	3	2.1	2.1	4.6
Massachusetts	11	6	1.9	4.3
District of Columbia	1.1	0.1	1.8	0.8
Missouri	9	6	1.8	4.0
Kansas	4	3	1.8	3.6
Wyoming	0.8	0.4	1.8	2.8
North Dakota	1.1	0.7	1.7	3.8
Oklahoma	5	3	1.6	3.5
New Hampshire	1.5	1.3	1.4	4.4
West Virginia	2.1	1.7	1.2	3.6
Rhode Island	1.1	0.9	1.1	3.7
United States	842	399	3.4	5.9

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

Table 2. Since 1992, ISTEA has provided over one billion dollars to make bicycling more accessible and safer.

State	Total ISTEA spending FY1992-FY 1996	Total transportation projects	Total ISTEA spending on bicycles FY 1992-1996	# of bicycle projects	% of transportation spending on bicycles
Alaska	\$1,005,407,527	947	\$103,015,417	90	10.2%
Washington	\$2,240,996,730	3,506	\$102,692,021	234	4.6%
Nebraska	\$819,467,217	1,262	\$21,520,634	53	2.6%
Colorado	\$1,269,605,469	1,084	\$27,427,552	62	2.2%
Illinois	\$3,608,951,358	4,290	\$69,564,059	222	1.9%
Minnesota	\$1,436,045,567	1,658	\$25,567,139	73	1.8%
Nevada	\$693,147,189	458	\$12,285,652	13	1.8%
New Mexico	\$991,863,053	837	\$16,554,388	42	1.7%
Georgia	\$2,482,231,110	3,248	\$39,476,266	43	1.6%
Tennessee	\$1,853,707,024	1,619	\$28,133,296	45	1.5%
New York	\$5,218,335,394	4,276	\$76,262,407	165	1.5%
Montana	\$863,776,931	1,859	\$11,333,086	121	1.3%
Florida	\$4,239,626,124	3,853	\$53,845,384	229	1.3%
Rhode Island	\$543,615,595	557	\$6,849,867	9	1.3%
Vermont	\$394,340,785	1,279	\$4,824,105	48	1.2%
Wyoming	\$647,814,782	808	\$7,688,534	61	1.2%
South Dakota	\$629,152,930	1,757	\$6,832,972	65	1.1%
North Dakota	\$593,035,432	1,217	\$6,092,961	60	1.0%
Hawaii	\$929,764,271	385	\$9,515,268	25	1.0%
Ohio	\$3,688,838,327	3,244	\$37,524,362	53	1.0%
Pennsylvania	\$4,273,160,377	4,153	\$42,995,901	170	1.0%
New Hampshire	\$445,495,160	800	\$4,414,157	62	1.0%
Connecticut	\$1,951,354,852	1,939	\$19,043,560	66	1.0%
Arizona	\$1,429,513,667	1,198	\$13,621,856	49	1.0%
Iowa	\$1,313,488,453	1,606	\$12,469,252	15	0.9%
Virginia	\$2,179,539,196	2,189	\$20,100,714	63	0.9%
Michigan	\$2,909,144,429	5,375	\$25,954,330	175	0.9%
Maine	\$580,972,465	1,574	\$5,154,500	61	0.9%
Wisconsin	\$1,727,204,310	3,546	\$14,338,705	114	0.8%
Kansas	\$1,055,880,323	1,774	\$8,687,514	28	0.8%
Oregon	\$1,271,959,316	1,379	\$10,294,134	50	0.8%
Alabama	\$1,770,945,466	2,842	\$13,283,635	73	0.8%
District of Columbia	\$470,844,174	561	\$3,497,621	14	0.7%
Kentucky	\$1,457,600,431	2,039	\$9,189,191	32	0.6%
Idaho	\$671,497,343	1,099	\$4,198,284	36	0.6%
Utah	\$702,066,911	846	\$4,036,856	39	0.6%
California	\$10,918,644,178	7,781	\$62,435,523	191	0.6%
Maryland	\$1,813,907,420	2,147	\$9,736,206	24	0.5%
Indiana	\$2,054,995,931	2,911	\$10,636,558	29	0.5%
West Virginia	\$1,479,755,571	2,050	\$6,978,098	27	0.5%
North Carolina	\$2,671,186,233	2,301	\$12,129,191	206	0.5%
Delaware	\$414,404,855	432	\$1,848,026	14	0.4%
South Carolina	\$1,288,133,737	2,190	\$5,462,342	44	0.4%
Texas	\$5,703,639,827	4,358	\$19,772,235	52	0.3%
Oklahoma	\$1,306,876,400	2,361	\$4,049,578	25	0.3%
New Jersey	\$2,663,286,781	1,746	\$5,940,085	10	0.2%
Mississippi	\$1,109,167,973	1,299	\$1,954,682	6	0.2%
Missouri	\$2,245,124,516	2,807	\$3,274,370	36	0.1%
Louisiana	\$1,324,422,990	1,889	\$1,928,767	18	0.1%
Massachusetts	\$6,212,226,750	1,296	\$7,869,054	16	0.1%
Arkansas	\$1,319,805,285	1,383	\$1,283,367	18	0.1%
United States Totals	\$100,885,968,131	108,015	\$1,033,583,662	3,476	1.0%

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

Hollywood-Pompano Beach (7.7) and Orlando (7.1) (Table 2). Four of the five metropolitan areas with the highest fatality rates for bicyclists were in Florida. The metropolitan areas with the highest bicycling fatality rates tend to be newer, sprawling, southern and western communities, where transportation systems are for now biased towards the car³.

Recommendations

We can have safer roads for bicycling — if transportation planners and engineers, bicycle riders, and drivers accept appropriate responsibilities for making communities safer. The Bicycle Federation of America has developed a four point plan to make our communities bicycle friendly — four points aimed at making roads better and drivers and bicyclists smarter.

- *Good roads.* Streets and highways are designed and built to accommodate all users — bicycle riders, pedestrians, and motor vehicles. Bicycle lanes are provided on many streets. Traffic calming techniques are used to ensure that motor vehicles operate at the appropriate speed.
- *More trails.* Multi-use trails are developed on rights-of-way, and have few, if any, at grade crossing of streets. Abandoned railroad rights-of-way are

used extensively to provide good trails. Children and casual adult riders have good places to develop riding skills and to ride together socially.

- *Better drivers* Motor vehicle operators act responsibly and with due care and respect for other users of the streets and highways. Speeding, running red lights, and other forms of aggressive driving are minimal. Traffic laws are routinely enforced and our courts hold drivers strictly accountable for the consequences of their actions.
- *Better bicyclists.* Bicyclists understand how to operate on streets and in traffic as vehicles (bicycles are defined as vehicles in all 50 states). They obey traffic laws and law enforcement activities are used to ensure compliance. Children get bicycle safety education and training in school. All bicyclists use appropriate safety gear.

Each of the elements of this four point plan can be addressed, in part, by improvements in ISTEA. ISTEA has provided vital support for bicycle use and bicycle safety and our findings indicate that improvements to the law can make our streets and highways better for bicyclists. To ensure that these goals are met, in the reauthorization of ISTEA Congress must:

- Double the amount of money in ISTEA that is dedicated to bicycle facilities and projects.
- Preserve and expand ISTEA's funding framework and planning provisions, especially for bicycles and pedestrians. Congress must reject proposals that would allow money from the "Enhancements" and "Congestion Mitigation and Air Quality Improvement" (CMAQ) programs (the largest source of money for bicycle use and bicycle safety) to be transferred to other programs.
- Require that all highway, road, and transit projects include appropriate accommodations for bicyclists and pedestrians.
- Improve the transportation planning and implementation process to better accommodate bicycles, by ensuring that bicycle projects included in transportation plans are implemented at least at the same rate as improvements for other modes of transportation.
- Ensure that bicyclists and pedestrians get a fair share of federal safety program dollars, and make ISTEA's safety programs responsive to the safety needs of non-motorized travelers. States should be required to allocate ISTEA safety funds to bicycle and pedestrian safety programs at a rate at least equal to the percentage of bicycle and pedestrian fatalities in that state. Special emphasis should be given to funding bicycle safety education and training.
- Collect more accurate and detailed data on bicycling and walking. There is no comprehensive information on bicycle miles traveled, as there is for motor vehicle miles traveled. More information is needed about how much and how often people ride their bicycles and how these factors vary within and among differing communities. The reauthorization of ISTEA presents an ideal opportunity to correct this information vacuum.

INVESTMENTS IN BICYCLE SAFETY WILL SAVE LIVES

The risk of death in an automobile provides a fitting comparison, and a call to action to reduce bicycle risks. Each year, over 35,000 people die in automobiles. But just as we don't stop driving, we shouldn't stop bicycling. Instead, transportation officials and auto safety advocates make every effort to make roads and cars safer for driving. And these efforts have

paid off. Between 1975 and 1995, fatality rates (per vehicle mile traveled) for passenger car occupants decreased by 40 percent (U.S. DOT 1995). A similar — and much less expensive — effort on behalf of bicycle safety would save hundreds of lives every year.

Notes

¹ “Bicycle fatality rate” refers to the number of bicyclists killed by cars, relative to the total population of a given area.

² Metropolitan areas with populations of 1 million or more.

³ A previous report (EWG 1996) found that many of these communities were also among the least safe for pedestrians.

Introduction

We all remember the thrill of getting our first bicycle as a child, and the new freedom it gave us. This year, more than 100 million Americans will go for a bicycle ride, and continue to enjoy the thrill as they pedal along with their families, commute to work on bike, or just ride around town. Each year, more Americans take to the road on bikes than ever before. Ten million more Americans ride bicycles today than rode in 1991 — a ten percent increase.

Actively promoting bicycling and bicycle safety is a straightforward way to improve public health. In an era when children are less physically active than ever, the Surgeon General and the Centers for Disease Control and Prevention actively promote bicycling as a form of exercise that will improve the health of America's children (CDC 1996). And bicycling is not only good for us, it is good for our communities. Indeed, widespread bicycling is an indicator of the livability of any neighborhood. If a community is safe for children to ride their bicycles in, then it is safe for the rest of us, and a good place to live.

Bicycling improves air quality, reduces congestion, and gives people new transportation choices — better, faster, and cheaper ways to get from point A to point B. Today, in too many communities, children are dependent upon adults for transportation — forced to take the bus to schools only blocks away, and “needing a ride” to virtually every kind of activity. Making our streets safe for children on bicycles will give them added mobility and freedom, reducing the transport burden on busy “soccer moms” and dads forced to play the role of chauffeur. In a recent nationwide survey, four out of five voters agreed that creating safer communities for children was a key justification for spending transportation moneys for sidewalks, bicycle trails, and bicycle lanes (Lake Research 1997).

In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA). This legislation, which provides over \$20 billion a year for the nation's transportation system, calls for a major shift in America's transportation policy. ISTEA provided new funding to increase bicycle use and make bicycling safer —

the first time that federal “highway” funds were dedicated to bicycling. But ISTEA provided more than new funding sources: it mapped out a new orientation for transportation policy. In the post-ISTEA era, more decisions are to be made at the local and regional levels. Now, communities have the right to develop transportation plans that are compatible with their transportation needs and reflect the concerns of their neighborhoods. Communities are investing in improvements like transit, sidewalks, traffic calming, and better accommodations for bicycles. This marks a vast improvement from the days when U.S. transportation policy consisted solely of giving taxpayers’ money to state highway departments to build wider and faster roads, with virtually no input from the public.

Slowly but surely, ISTEA is making our communities more bicycle-friendly. Although ISTEA’s new planning requirements and funding programs have only been in existence for five years, hundreds of miles of bicycle lanes and trails have already been added to our communities, and are almost certainly a factor in the increased number of people riding bicycles. But there is still a lot of room for improve-

ment. Our analysis indicates that preserving and strengthening the pro-bicycling features of ISTEA can encourage more bicycle use and make bicycling even safer. Indeed, with some modest improvements to ISTEA to expand the development of safer communities hundreds of lives could be saved.

Millions of Americans — Children and Adults — Ride Bicycles

Bicycling is a vital part of our lives. This year, more than 100 million Americans — more than one in three — will go for a bicycle ride. Almost one half of these riders are children under 16. Approximately 5 million Americans commute to work by bicycle (BFA 1997). And according to bicycle industry figures, almost 60 million bicycles have been sold in the last 5 years, and over 30 million of those have been sold for children (Bicycle Manufacturers Association 1997). In fact, more new bicycles than new cars are sold every year in the United States. And bicycling continues to grow more popular. Since the passage of ISTEA in 1991, the number of bicyclists has increased by more than 10%, from 96 million to 105 million.

ISTEA Has Provided Critical Support For Making Communities Bicycle Friendly

The passage in 1991 of a new national transportation policy and law, known as the Intermodal Surface Transportation Efficiency Act (ISTEA) marked a sea change in federal support for bicycle friendly communities. Before the passage of this landmark legislation, bicyclists and pedestrians were forgotten and practically ignored by federal, state and local transportation planners. ISTEA has helped change this by providing both institutional and financial support to make communities safer for bicyclists and pedestrians.

Institutional Support

ISTEA is the first federal law to call for the routine inclusion of bicycling in state and local transportation plans, and for public involvement in the development of these plans. For the first time, the law requires that each state Department of Transportation appoint a bicycle and pedestrian coordinator, an important advocate for ensuring that bicyclists and pedestrians are included in long-range transportation plans as well as in the design of streets and highways.

Financial Support

ISTEA has increased public investment in bicycle safety and bicycle friendly communities by providing specific financial assistance that was not available before the law's passage. Since ISTEA's passage in 1991, over \$1 billion has been spent on bicycle and pedestrian trails, bike lanes and other improvements to encourage more bicycling. The majority of this money comes from ISTEA's "Enhancements" program — a fund dedicated to ten categories of activity that enhance the transportation system, including bicycle and pedestrian facilities, and rails to trails conversions. Other funds have come from the Congestion Mitigation and Air Quality Improvement program, and from the routine inclusion of provisions for bikes as part of good highway design.

This money for bicycles is a relatively small fraction — less than 1 percent — of the more than \$100 billion in federal funds that have been spent to improve the nation's transportation system since passage of ISTEA. While every state has used ISTEA money for bicycles and pedestri-

Table 8. Since 1992, ISTEA has provided over one billion dollars to make bicycling more accessible and safer.

State	Total ISTEA spending FY1992-FY 1996	Total transportation projects	Total ISTEA spending on bicycles FY 1992-1996	# of bicycle projects	% of transportation spending on bicycles
Alaska	\$1,005,407,527	947	\$103,015,417	90	10.2%
Washington	\$2,240,996,730	3,506	\$102,692,021	234	4.6%
Nebraska	\$819,467,217	1,262	\$21,520,634	53	2.6%
Colorado	\$1,269,605,469	1,084	\$27,427,552	62	2.2%
Illinois	\$3,608,951,358	4,290	\$69,564,059	222	1.9%
Minnesota	\$1,436,045,567	1,658	\$25,567,139	73	1.8%
Nevada	\$693,147,189	458	\$12,285,652	13	1.8%
New Mexico	\$991,863,053	837	\$16,554,388	42	1.7%
Georgia	\$2,482,231,110	3,248	\$39,476,266	43	1.6%
Tennessee	\$1,853,707,024	1,619	\$28,133,296	45	1.5%
New York	\$5,218,335,394	4,276	\$76,262,407	165	1.5%
Montana	\$863,776,931	1,859	\$11,333,086	121	1.3%
Florida	\$4,239,626,124	3,853	\$53,845,384	229	1.3%
Rhode Island	\$543,615,595	557	\$6,849,867	9	1.3%
Vermont	\$394,340,785	1,279	\$4,824,105	48	1.2%
Wyoming	\$647,814,782	808	\$7,688,534	61	1.2%
South Dakota	\$629,152,930	1,757	\$6,832,972	65	1.1%
North Dakota	\$593,035,432	1,217	\$6,092,961	60	1.0%
Hawaii	\$929,764,271	385	\$9,515,268	25	1.0%
Ohio	\$3,688,838,327	3,244	\$37,524,362	53	1.0%
Pennsylvania	\$4,273,160,377	4,153	\$42,995,901	170	1.0%
New Hampshire	\$445,495,160	800	\$4,414,157	62	1.0%
Connecticut	\$1,951,354,852	1,939	\$19,043,560	66	1.0%
Arizona	\$1,429,513,667	1,198	\$13,621,856	49	1.0%
Iowa	\$1,313,488,453	1,606	\$12,469,252	15	0.9%
Virginia	\$2,179,539,196	2,189	\$20,100,714	63	0.9%
Michigan	\$2,909,144,429	5,375	\$25,954,330	175	0.9%
Maine	\$580,972,465	1,574	\$5,154,500	61	0.9%
Wisconsin	\$1,727,204,310	3,546	\$14,338,705	114	0.8%
Kansas	\$1,055,880,323	1,774	\$8,687,514	28	0.8%
Oregon	\$1,271,959,316	1,379	\$10,294,134	50	0.8%
Alabama	\$1,770,945,466	2,842	\$13,283,635	73	0.8%
District of Columbia	\$470,844,174	561	\$3,497,621	14	0.7%
Kentucky	\$1,457,600,431	2,039	\$9,189,191	32	0.6%
Idaho	\$671,497,343	1,099	\$4,198,284	36	0.6%
Utah	\$702,066,911	846	\$4,036,856	39	0.6%
California	\$10,918,644,178	7,781	\$62,435,523	191	0.6%
Maryland	\$1,813,907,420	2,147	\$9,736,206	24	0.5%
Indiana	\$2,054,995,931	2,911	\$10,636,558	29	0.5%
West Virginia	\$1,479,755,571	2,050	\$6,978,098	27	0.5%
North Carolina	\$2,671,186,233	2,301	\$12,129,191	206	0.5%
Delaware	\$414,404,855	432	\$1,848,026	14	0.4%
South Carolina	\$1,288,133,737	2,190	\$5,462,342	44	0.4%
Texas	\$5,703,639,827	4,358	\$19,772,235	52	0.3%
Oklahoma	\$1,306,876,400	2,361	\$4,049,578	25	0.3%
New Jersey	\$2,663,286,781	1,746	\$5,940,085	10	0.2%
Mississippi	\$1,109,167,973	1,299	\$1,954,682	6	0.2%
Missouri	\$2,245,124,516	2,807	\$3,274,370	36	0.1%
Louisiana	\$1,324,422,990	1,889	\$1,928,767	18	0.1%
Massachusetts	\$6,212,226,750	1,296	\$7,869,054	16	0.1%
Arkansas	\$1,319,805,285	1,383	\$1,283,367	18	0.1%
United States Totals	\$100,885,968,131	108,015	\$1,033,583,662	3,476	1.0%

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

ans, some states continue to devote only a small percentage of federal highway funds to bicycle activities. Only four states — Alaska, Washington, Nebraska, and Colorado - have spent more than two percent of their federal highway dollars on improvements to increase the safety and use of bicycles in their communities (Table 8).

However, even this tiny commitment marks a dramatic change in spending priorities to make communities more bicycle-friendly. Before 1991, states were allowed to spend federal highway money on bicycle projects. But, in the eighteen years between 1973 and 1991, they spent a total of \$40 million nationally — or only two million dollars per year (FHWA 1996)¹. Since 1991, the average annual spending on bicyclists increased more than 100 times.

FHWA data indicate that this federal highway money has been used to build hundreds of bike trails and lanes throughout the country. And these improvements increase bicycle safety. An innovative 1997 survey ranked the relative danger of bicycle trails, as well as streets with and without bike lanes (Moritz 1997). This study found that, per mile cycled, streets with bike lanes were twice as safe as streets without bike lanes. Similarly, bike trails were more than 1.5 times safer than streets without bike lanes. The bottom line? Investments in bicycle lanes, paved shoulders, and bike trails,

and paths can help make bicycling safer.

In other areas funding for bicycles continues to lag. While ISTEA's Enhancements and CMAQ programs have provided a significant source of money for bicycling, bicyclists and pedestrians have not received their fair share of support from other ISTEA programs — especially when compared with other safety priorities. For example, virtually no money has been used from ISTEA's safety programs (known as the STP safety set-aside and the Section 402 program) to improve bicycle safety and bicycle education.

The Road Gang's" Congressional Proposals To End Support For Bicycles

In spite of the clear need to make our roads safer for bicycling, some proposals before Congress seek to reverse our nation's transportation policy and return us to the highways-only days by eliminating many of the gains made when ISTEA was passed in 1991. These proposals would make our communities less safe for bicyclists.. Most of these proposals are supported by the "Road Gang", a collection of lobbyists for the highway, oil, and automobile industries, as well as many state Departments of Transportation. Proposals include:

- A proposal, scheduled for a committee vote in late May, by Rep. Bud Shuster (R-

PA), chair of the House Transportation and Infrastructure Committee, would purportedly increase funding for the 'Enhancements' and 'Congestion Mitigation and Air Quality Improvement' programs (the primary sources of funding for bike facilities under ISTEA). But, it would allow the states to transfer this money and use it to build more highways instead, almost certainly returning transportation policy to the pre-ISTEA days when almost no money was spent on bicycle use and bicycle safety (BNA 1997).

- A proposal known as "STEP-21," introduced in the House by Tom DeLay (R-TX) would gut the ISTEA law by turning the entire program into a federal block grant — essentially eliminating the dedicated Enhancements and Congestion Mitigation and Air Quality Improvement (CMAQ) programs that have provided over \$1 billion for

bikes since 1991.

- "STARS-2000," legislation introduced by Sen. Max Baucus (D-MT) would also reshape ISTEA and reduce funding for bicycle-safe streets. In addition, this legislation would cut funding for the Congestion Mitigation and Air Quality Improvement Program by almost two thirds, from \$1 billion per year to \$387 million per year.

Note

¹ Making this lack of effort even more glaring is the fact that states were reimbursed with federal dollars for 100 percent of their expenses. Post-ISTEA, the federal share is only 80 percent, yet states have dramatically increased bicycle investments.

Findings

Bikes are an important and growing transportation option, a vital form of recreation, and a valuable form of exercise for children and adults. Bicycling is good for the environment, and good for communities and the people who live in them. But bicycling is not as safe as it could — and should — be. Indeed, the emergence of the “soccer mom” — chauffeuring kids around town in gas-guzzling minivans — as a political and cultural icon reflects in part the need to make our communities more friendly for two-wheeled, nonmotorized travel. Today, in too many communities, children are dependent upon adults for transportation — forced to take the bus to schools only blocks away, and “needing a ride” to virtually every kind of activity. Making our streets safe for children on bicycles will give them added mobility and freedom, and reduce the transport burden on their parents.

There is strong public support for these actions. In a recent nationwide survey, four out of five voters agreed that creating safer communities for children was a key justification for spending transportation moneys for sidewalks, bicycle trails, and bicycle lanes (Lake Research 1997).

Our analysis of National Highway Traffic Safety Administration data indicate that we can make bicycling safer. Consider that:

- Between 1986 and 1995, an average of 840 bicyclists annually were struck and killed by motor vehicles. And for every bicyclist killed by a car, another 88 suffer injuries — for a total of 75,000 bicyclists injured by cars each year.
- On average, a child on a bicycle is killed by an automobile every day in the United States. Almost half — 47 percent — of all bicycle fatalities involved children under 18 — an average of 399 fatalities a year.
- Many children are also injured; for every child on a bike who is killed by a car another 100 are injured, for a total of 38,500 children injured by cars while bicycling each year.
- More than two thirds of all bicycle fatalities (68 percent) occur on neighborhood streets (defined as local roads, collectors, and minor arterials). An even

BICYCLE-FRIENDLY CITIES

Bicycling magazine has named the following five cities as the most bicycle friendly in the United States:

1. Portland, Oregon
2. Tucson, Arizona
3. Madison, Wisconsin
4. Seattle, Washington
5. Denver, Colorado

higher percentage of children — 77 percent — are killed while bicycling on neighborhood streets.

These data serve as indicators of the work that needs to be done, and of the vast benefits that can be achieved if our roads are made safer for bicycling. Some people may be tempted to look at these data and conclude that they — and their children — should stay off of bicycles because of safety concerns. This would be a mistake. Bicycling remains an activity that is good for our children, our health, and our communities. The real goals are to make bicycling more accessible *and* safer. The city of Davis, California provides an example of how this can be done. Davis began considering bicycle use and bicycle safety years before ISTEA was passed in 1991. The city has built many miles of bike trails and lanes, implemented education and enforcement campaigns, and aggressively acted to reduce risks. As a result, more than 20 percent of trips in Davis are made by bike

(many times higher than the national average), and children ride everywhere. The community has many bike riders, and the risk of bicycling has been minimized.

The risk of death in an automobile provides a fitting comparison, and a call to action to reduce bicycle risks. Each year, over 35,000 people die in automobiles. But just as we don't stop driving, we shouldn't stop bicycling. Transportation officials and auto safety advocates make every effort to make roads and cars safer for driving. And these efforts have paid off. Between 1975 and 1995, fatality rates (per vehicle mile traveled) for passenger car occupants decreased by 40 percent (US DOT 1995). A similar — and much less expensive — effort on behalf of bicycle safety would save hundreds of lives every year.

Our findings show that we need to preserve and strengthen ISTEA to help communities to accommodate and encourage bicycling while reducing the current risks. We need to make our communities bicycle-friendly for our kids...and ourselves.

Where Are Bicycle Fatality Rates The Highest?

Nationwide, between 1986 and 1995, an average of 842 bicyclists were killed each year by automobiles (Table 3). California (123), Florida (114) and Texas (56) were the three states with the most bicycle fatalities

Table 3. California, Florida, and Texas were the three states with the most traffic-related bicycle fatalities.

State	Annual average number of bicyclists killed by cars (1986-1995)	Average annual # of children killed on bikes by cars (1986-1995)	Estimated annual number of bicyclists injured by cars (1986-1995)	Average annual # of children on bikes injured by cars (1986-1995)
California	123	42	10,806	4,230
Florida	114	34	9,997	3,380
Texas	56	26	4,937	2,640
New York	52	24	4,594	2,420
Michigan	34	21	3,010	2,130
Illinois	30	16	2,675	1,640
North Carolina	30	15	2,640	1,490
Ohio	26	16	2,288	1,620
Arizona	26	9	2,262	930
Pennsylvania	25	15	2,235	1,530
Louisiana	25	12	2,209	1,240
New Jersey	22	12	1,962	1,240
Georgia	20	12	1,742	1,180
South Carolina	19	9	1,646	940
Indiana	17	9	1,514	940
Virginia	16	7	1,426	670
Wisconsin	13	8	1,153	750
Oregon	12	5	1,012	460
Massachusetts	11	6	1,003	620
Washington	11	7	986	660
Minnesota	11	6	968	610
Colorado	11	5	968	480
Tennessee	11	7	950	700
Maryland	11	6	942	560
Alabama	11	7	924	710
Missouri	9	6	801	560
Mississippi	9	5	748	500
Kentucky	8	6	713	560
Iowa	8	4	678	410
Connecticut	8	4	669	430
Utah	7	5	642	500
Arkansas	6	4	484	350
New Mexico	6	3	484	250
Oklahoma	5	3	449	310
Nevada	5	2	440	220
Kansas	4	3	387	250
Hawaii	4	1.3	343	130
Idaho	3	3	290	290
Nebraska	3	2	290	210
Montana	3	1.8	282	180
Maine	3	1.6	246	160
Delaware	3	1.3	229	130
West Virginia	2	1.7	185	170
Alaska	1.8	0.8	158	80
New Hampshire	1.5	1.3	132	130
South Dakota	1.5	0.8	132	80
Vermont	1.5	0.5	132	50
Rhode Island	1.1	0.9	97	90
North Dakota	1.1	0.7	97	70
District of Columbia	1.1	0.1	97	10
Wyoming	0.8	0.4	70	40
United States	842	399	74,122	39,930

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

each year. These states also had the most children age 18 and under killed each year — 42 per year in California, 34 per year in Florida, and 26 per year in Texas.

When states are ranked by per capita fatality *rate*, the results are quite different. The average bicycle fatality rate between 1986 and 1995 was 3.4 bicyclists per million population. In Florida, which had the highest fatality rate, this rate was more than twice as high - 8.8 bicyclists killed per million. After Florida, the four states with the highest fatality rates were Arizona (7.0), Louisiana (5.9), South Carolina (5.4), and North Carolina (4.5) (Table 4).

Nationwide, bicyclists accounted for 1.9 percent of all motor vehicle related fatalities. Bicyclists accounted for a higher proportion of all auto-related fatalities in Florida than in any other state — 4.1 percent — more than twice the national average. Other states with a high proportion of auto related fatalities involving bicyclists were Arizona (2.9%), Louisiana (2.8%), Hawaii (2.8%), and New York (2.6%) (Table 5).

In the 44 metropolitan areas with populations of one million or more, the per capita bicycle fatality rate was 3.1 per million residents. In Tampa-St. Petersburg-Clearwater, the large metropolitan area with the highest fatality rate, the per capita bicyclist fatality rate was three times as

high — 9.3 bicyclists per million. Other large metro areas with bicycle fatality rates more than twice the national average included Miami-Hialeah (7.7), Phoenix (7.7), Fort Lauderdale-Hollywood-Pompano Beach (7.7) and Orlando (7.1) (Table 6). Four of the five large metropolitan areas with the nation's highest fatality rates for bicycling were in Florida.

The three large metropolitan areas with the lowest per capita fatality rates were Providence-Pawtucket-Woonsocket, Rhode Island (0.7 bicyclists per million), Pittsburgh (1.2) and Boston (1.4). The fatality rate in Tampa-St. Petersburg-Clearwater was more than 13 times higher than the comparable rate in Providence-Pawtucket-Woonsocket.

Bicyclists also accounted for a higher proportion of all auto-related fatalities in Tampa-St. Petersburg-Clearwater than in any other large metropolitan area. In Tampa-St. Petersburg-Clearwater, 5.1% of all auto-related fatalities were bicyclists — more than twice the average of 2.5% for all large metropolitan areas. Other metropolitan areas with a high proportion of auto related fatalities involving bicyclists were Anaheim-Santa Ana (4.9%), Fort Lauderdale-Hollywood-Pompano Beach (4.7%), and Phoenix (4.6%) (Table 7).

The Los Angeles-Long Beach metro area had the most bicycle fatalities, an average of 34 per

Table 4. Florida, Arizona, and Louisiana were the three states with the highest traffic-related bicycle fatality rates.

State	Annual number of bicyclists killed by cars (1986-1995)	Average annual # of children killed on bikes by cars (1986-1995)	Fatality rate per million (bicyclists killed by cars)	Child bicyclist fatality rate per million (bicyclists killed by cars)
Florida	114	34	8.8	11.2
Arizona	26	9	7.0	9.0
Louisiana	25	12	5.9	9.6
South Carolina	19	9	5.4	9.6
North Carolina	30	15	4.5	8.7
Utah	7	5	4.2	7.6
Nevada	5	2.2	4.2	7.1
California	123	42	4.1	5.2
Oregon	12	5	4.0	6.0
Montana	3	1.8	4.0	7.7
Delaware	3	1.3	3.9	7.5
Michigan	34	21	3.7	8.2
New Mexico	6	3	3.6	5.3
Hawaii	4	1.3	3.5	4.4
Colorado	11	5	3.3	5.3
Mississippi	9	5	3.3	6.3
Texas	56	26	3.3	5.2
Idaho	3	3	3.3	9.0
Alaska	1.8	0.8	3.3	4.5
Indiana	17	9	3.1	6.1
Georgia	20	12	3.1	6.4
New York	52	24	2.9	5.4
New Jersey	22	12	2.9	6.5
Iowa	8	4	2.8	5.4
Wisconsin	13	8	2.7	5.5
Vermont	1.5	0.5	2.7	3.3
Illinois	30	16	2.7	5.3
Virginia	16	7	2.6	4.2
Alabama	11	7	2.6	6.3
Minnesota	11	6	2.5	5.0
Ohio	26	16	2.4	5.5
Arkansas	6	4	2.3	5.3
Connecticut	8	4	2.3	5.4
Washington	11	7	2.3	5.0
Maine	3	1.6	2.3	4.9
Maryland	11	6	2.2	4.6
Tennessee	11	7	2.2	5.4
Kentucky	8	6	2.2	5.5
South Dakota	1.5	0.8	2.2	3.8
Pennsylvania	25	15	2.1	5.2
Nebraska	3	2.1	2.1	4.6
Massachusetts	11	6	1.9	4.3
District of Columbia	1.1	0.1	1.8	0.8
Missouri	9	6	1.8	4.0
Kansas	4	3	1.8	3.6
Wyoming	0.8	0.4	1.8	2.8
North Dakota	1.1	0.7	1.7	3.8
Oklahoma	5	3	1.6	3.5
New Hampshire	1.5	1.3	1.4	4.4
West Virginia	2.1	1.7	1.2	3.6
Rhode Island	1.1	0.9	1.1	3.7
United States	842	399	3.4	5.9

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

Table 5. Bicyclists accounted for four percent of all auto-related fatalities in Florida — twice the national average.

State	Annual traffic-related fatalities (1986-1995)	Annual traffic-related bicycle fatalities (1986-1995)	% of all deaths that are bicycle riders
Florida	2,764	114	4.1%
Arizona	900	26	2.9%
Louisiana	887	25	2.8%
Hawaii	138	4	2.8%
New York	2,016	52	2.6%
California	4,822	123	2.5%
New Jersey	876	22	2.5%
Utah	299	7	2.4%
Michigan	1,520	34	2.3%
North Carolina	1,456	30	2.1%
Oregon	566	12	2.0%
Delaware	128	3	2.0%
Connecticut	375	8	2.0%
South Carolina	942	19	2.0%
Colorado	562	11	2.0%
United States Average	43,312	842	1.9%

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

year, followed by New York and Tampa-St. Petersburg-Clearwater metro areas, with 19 each.

Are Communities With Low Fatality Rates the “Safest”?

Because there is no adequate data available on the prevalence of biking within a given community we were unable to normalize fatality rates on a “per mile cycled” or a “per bicycle trip” basis. The data presented — per capita fatality rates for bicyclists — tell part, but not all of the story. Communities with high fatality rates may not necessarily be “most dangerous”, and

those with low fatality rates may not be the “safest”. For example, communities with low fatality rates may be inherently safe places to ride. Alternatively, the low fatality rates may be masking the fact that the community is so unfriendly to biking that very few people bike at all. (Also, some communities and states with high rates are already hard at work — often with ISTEA funds — to improve conditions for bicycling.) Until the federal government makes a commitment to collect adequate data on bicycling prevalence — much like the extensive data collected on driving — only

Table 6. Four of the five large metropolitan areas with the highest traffic-related bicyclist fatality rates are in Florida.

Metropolitan Area	Population	Annual average number of bicyclists killed by cars (1986-1995)	Estimated annual average # of bicyclists injured by cars (1986-1995)	Annual bicyclists under age 18 killed by cars (1986-1995)	Bicyclist fatality rate, per 1,000,000 (bicyclists killed by cars) (1986-1995)
Tampa--St. Petersburg--Clearwater, FL MSA	2,067,959	19	1,672	6	9.2
Miami--Hialeah, FL PMSA	1,937,094	15	1,320	3	7.7
Phoenix, AZ MSA	2,122,101	16	1,443	6	7.7
Fort Lauderdale--Hollywood--Pompano Beach, FL PMSA	1,255,488	10	854	2	7.7
Orlando, FL MSA	1,072,748	8	669	3	7.1
Riverside--San Bernardino, CA PMSA	2,588,793	13	1,179	5	5.2
New Orleans, LA MSA	1,238,816	6	554	3	5.1
Anaheim--Santa Ana, CA PMSA	2,410,556	12	1,038	3	4.9
Sacramento, CA MSA	1,481,102	6	563	1.6	4.3
San Diego, CA MSA	2,498,016	10	915	4	4.2
Salt Lake City--Ogden, UT MSA	1,072,227	4	387	3	4.1
Rochester, NY MSA	1,002,410	4	361	3	4.1
Nassau--Suffolk, NY PMSA	2,609,212	11	933	5	4.1
Norfolk--Virginia Beach--Newport News, VA MSA	1,396,107	5	475	1.2	3.9
Los Angeles--Long Beach, CA PMSA	8,863,164	34	2,992	10	3.8
Houston, TX PMSA	3,301,937	12	1,091	4	3.8
Portland, OR PMSA	1,239,842	4	352	1.5	3.2
San Jose, CA PMSA	1,497,577	5	422	1.5	3.2
Columbus, OH MSA	1,377,419	4	352	3	2.9
Middlesex--Somerset--Hunterdon, NJ PMSA	1,019,835	3	255	2	2.8
San Antonio, TX MSA	1,302,099	4	308	2	2.7
Philadelphia, PA--NJ PMSA	4,856,881	13	1,135	7	2.7
Indianapolis, IN MSA	1,249,822	3	282	2	2.6
Denver, CO PMSA	1,622,980	4	361	1.5	2.5
Detroit, MI PMSA	4,382,299	11	968	6	2.5
Charlotte--Gastonia--Rock Hill, NC--SC MSA	1,162,093	3	255	2	2.5
Hartford--New Britain--Middletown, CT CMSA	1,085,837	3	238	1	2.5
San Francisco, CA PMSA	1,603,678	4	343	0.9	2.4
Oakland, CA PMSA	2,082,914	5	440	1.7	2.4
Dallas, TX PMSA	2,553,362	6	528	4	2.3
Chicago, IL PMSA	6,069,974	14	1,250	6	2.3
New York, NY PMSA	8,546,846	19	1,707	5	2.3
Baltimore, MD MSA	2,382,172	5	466	3	2.2
Fort Worth--Arlington, TX PMSA	1,332,053	3	255	1.5	2.2
Minneapolis--St. Paul, MN--WI MSA	2,464,124	5	466	3	2.2
Atlanta, GA MSA	2,833,511	6	519	4	2.1
Bergen--Passaic, NJ PMSA	1,278,440	3	229	1.7	2.0
Cincinnati, OH--KY--IN PMSA	1,452,645	3	238	3	1.9
Seattle, WA PMSA	1,972,961	4	317	2	1.8
St. Louis, MO--IL MSA	2,444,099	4	370	3	1.7
Newark, NJ PMSA	1,824,321	3	264	1.8	1.6
Washington, DC--MD--VA MSA	3,923,574	6	563	2	1.6
Cleveland, OH PMSA	1,831,122	3	238	1.7	1.5
Kansas City, MO--KS MSA	1,566,280	2	202	1.2	1.5
Milwaukee, WI PMSA	1,432,149	2	185	1.1	1.5
Boston, MA PMSA	2,870,669	4	352	2	1.4
Pittsburgh, PA PMSA	2,056,705	3	220	2	1.2
Providence--Pawtucket--Woonsocket, RI	1,141,510	0.8	70	0.5	0.7
Average, metro areas with populations > 1,000,000					3.1

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

one thing is clear: that virtually every community, whether its fatality rate is high or low, can do more to encourage bicycling and make it safer.

Good Roads Are A Good Investment

In the late 1890's, the League of American Wheelmen (now the League of American Bicyclists)

Table 7. Bicyclists account for more than 5% of all traffic-related fatalities in the Tampa-St. Petersburg metro area.

Metropolitan Area	Population	Annual auto-related fatalities (1986-1995)	Annual number of bicyclists killed by cars (1986-1995)	% of all auto-related fatalities involving bicyclists
Tampa--St. Petersburg--Clearwater, FL MSA	2,067,959	380	19	5.1%
Anaheim--Santa Ana, CA PMSA	2,410,556	241	12	4.9%
Fort Lauderdale--Hollywood--Pompano Beach, FL PMSA	1,255,488	205	10	4.7%
Phoenix, AZ MSA	2,122,101	359	16	4.6%
Miami--Hialeah, FL PMSA	1,937,094	331	15	4.5%
Norfolk--Virginia Beach--Newport News, VA MSA	1,396,107	143	5	3.8%
Salt Lake City--Ogden, UT MSA	1,072,227	117	4	3.8%
San Jose, CA PMSA	1,497,577	130	5	3.7%
Orlando, FL MSA	1,072,748	206	8	3.7%
Rochester, NY MSA	1,002,410	116	4	3.5%
New Orleans, LA MSA	1,238,816	184	6	3.4%
Nassau--Suffolk, NY PMSA	2,609,212	329	11	3.2%
Los Angeles--Long Beach, CA PMSA	8,863,164	1099	34	3.1%
San Diego, CA MSA	2,498,016	352	10	3.0%
San Francisco, CA PMSA	1,603,678	136	4	2.9%
New York, NY PMSA	8,546,846	677	19	2.9%
Houston, TX PMSA	3,301,937	478	12	2.6%
Bergen--Passaic, NJ PMSA	1,278,440	101	3	2.6%
Middlesex--Somerset--HunTERdon, NJ PMSA	1,019,835	113	3	2.6%
Average, Metro Areas With Populations > 1,000,000				2.5%

Source: Environmental Working Group. Compiled from NHTSA FARS data for the years 1986-1995.

organized the “Good Roads” movement to campaign for the design and construction of a system of roadways to serve bicyclists. Over time, the movement fostered the creation of public roads agencies, ultimately leading to the formation of the Federal Highway Administration and state highway departments. But, over time, the agenda of the bicyclists was taken over by the agenda of motor vehicle interests. Instead of designing streets for safe and efficient movement of people, whether on foot, by bike, or by car, these groups focused on one thing, and one thing only: building roads for motor vehicles.

Today, some transportation experts are calling for a new Good Roads Movement. We must rethink and remake our street and highway system to serve the safe and efficient movement of people and goods — as opposed to just motor vehicles — by ensuring that the planning, design, construction, operation, and maintenance of our public way is organized to provide the public with real transportation choices — walking, bicycling, mass transit, and motor vehicles. Facilities that do this are indeed the “good roads” of the 21st century.

In its 1993 National Bicycling and Walking Study, the U.S. De-

partment of Transportation established goals for both increasing bicycling and walking and making travel by these modes safer. The US DOT's specific goals were to double the percentage of trips made by bicycling and walking, while decreasing the number of injuries and fatalities by 10 percent (US DOT 1994). With appropriate support and improvements in federal transportation legislation, we can build "good roads" and reach these goals.

Numerous polls and studies, as well as experience around the nation has shown that investments intended to make communities more bicycle-friendly are strongly supported by the general public as a good use of transportation funds to improve bicycle safety and provide for more balanced transportation choices. A 1997 poll found that 64% of voters supported using transportation money to build bike facilities, and more than 75 percent of voters agreed with the common-sense statement that, roads on which bicycles are allowed to operate should have appropriate accommodations for them (Lake Research 1997).

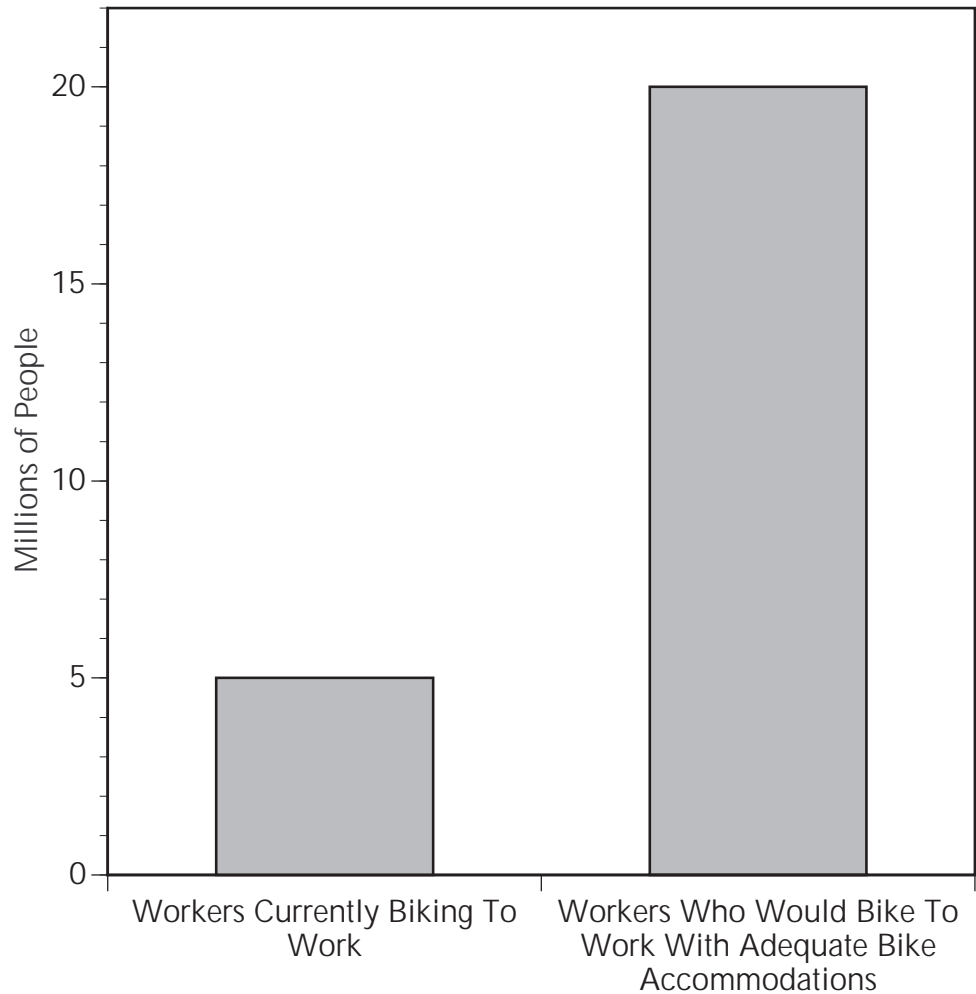
Indeed, if we build it they will come. In many communities, the only thing preventing more people from bicycling is the lack of adequate facilities. When streets are designed to serve bicycles and motor vehicles, more people will bike. Twenty-one million people — approximately 17 percent of the

workforce — say they would commute by bike if they had access to appropriate on- and off-road facilities in their community (Figure 2). There is tremendous latent demand for bicycling. The Bicycle Federation of America estimates that more than 120 million Americans own bikes. For many, it will take nothing more than a quick tune-up and good places to ride to get them riding more (BFA 1997). Wherever communities have provided bike facilities, especially multi-use trails, the number of bicyclists has dramatically increased.

Nationally, approximately seven percent of all trips are made on foot or by bicycle. But in communities where bicycling has been supported and encouraged, this percentage has increased significantly, to between 10 and 25 percent.

Davis, California, perhaps America's most bicycle friendly community, provides an example of how bicycle friendly communities can be created. The city has more miles of bike lanes and off-road bike paths per mile of roadway than any community in the U.S. — the equivalent of one-third of the city's street network. All major thoroughfares in the community have bike lanes paved shoulders, or wide outside curb lanes, and other facilities, such as bicycle parking, are provided to make riding safer and easier. The community has also aggressively acted to reduce risks. In one notable case, at a dangerous intersection that had

Figure 2. Building more and better bicycle facilities will increase the number of bicycle riders.



Source: *Bicycle Federation of America, "Bicycle Facts and Figures." 1997. Rodale Press, "Pathway for People." 1995.*

been the site of 16 car-bike collisions, the city changed the timing of the traffic signal (adding a "bikes only" phase to the signal). Since then, there have been no additional crashes. As a result of these kinds of efforts, 41 percent of Davis residents consider the bicycle their primary mode of transportation. Since 1986, FHWA data indicate that there has not been a single bicyclist killed by a car in Davis.

And bicycle friendly communities are livable communities. Among the many advantages of making our communities safer for cycling are that:

- Children and adults will have increased mobility, auto-independence, and increased transportation choices. Today, in too many communities, children are dependent upon

adults for transportation — forced to take the bus to schools only blocks away, and “needing a ride” to virtually every kind of activity. Making our streets safe for children on bicycles will reduce the burden on soccer moms and dads forced to play the role of chauffeur.

- Bicycling reduces traffic congestion. Bicycle trips can replace many short automobile trips — one more bike on the road often means one fewer car on the road. Forty percent of automobile trips are less than two miles in length (US DOT 1990.). If even a small percentage of these trips could be converted to bicycle trips, it would eliminate most traffic congestion.
- Bicycling conserves energy and improves air quality. Some estimates indicate that increased investment in bicycle-friendly communities could reduce total U.S. air emissions from automobiles by four percent, and save as much as three billion gallons of gasoline each year (US DOT 1993).
- Bicycle friendly communities are safe communities. In many communities, neighborhoods are being destroyed and children are being endangered as local streets are overrun by more and more cars operating at higher and higher speeds. Well-designed streets that are safe for children on bikes are safer for all of us — adults and children, bicycle riders, walkers and even drivers.
- Bicycle friendly communities are healthy communities. For the past several years, we’ve been hearing of a serious decline in physical activity and public health — especially among children. Children spend more time in front of the television set than playing outside, and adults lead more and more sedentary lives. Making communities bicycle-friendly will have important public health benefits as bicycle riding and walking — lifelong, low-impact, aerobic activities — increases The Surgeon General and the Centers For Disease Control and Prevention actively promote bicycling as a form of exercise (CDC 1996).

MAKING BICYCLING BETTER AND SAFER

We know that more, not less, bicycling can help make America a better place to live.

From the community livability and fitness benefits to cleaner air, less traffic congestion, and energy independence that increased bicycling usage can bring, we all benefit. However, a greater public investment in bicycling education and safety programs is needed — programs such as the Effective Cycling program of the League of American Bicyclists (LAB) that go beyond helmet promotion for injury reduction and focus on crash prevention and improving operational skills.

Congressman Martin Sabo (D-MN), calling the development of “an aggressive bicycle education and safety program” a high priority, said at a March, 1997, hearing of the U.S. House Transportation Appropriations subcommittee, “Congress has for years been involved in promoting bicycle use and

coordination with other transportation programs, but we have more fatalities from bicycle crashes than we do in aviation, railroad, or maritime crashes. It is a growing problem, and a number of them involve young people... Frankly, the air bag question is very important, but in terms of number of young folks involved, the whole biking issue has substantially greater impact on both fatalities and injuries.”

Bicycles are legally classified as vehicles in all 50 states, and teaching basic traffic principles to children as bicyclists offers a valuable opportunity to improve road safety for all users. That is why the League’s Effective Cycling program is based on the “Same Roads, Same Rights, Same Rules” principle that bicyclists fare best when they act and are treated as operators of vehicles — a principle that helps improve cycling safety for adults and children.

Of course, children and bikes go together, from the early sense of discovery and freedom to the

aerobic conditioning so important to a healthy lifestyle. But handing our children helmets and taking off the training wheels are not enough. We do not expect automobile drivers to drive without instruction, and we should not expect cyclists to ride without instruction. While the League's Effective Cycling program includes courses for novice to experienced cyclists and specialties like bike commuting and off-road riding, teaching the basics to kids may be the most important component.

Children enjoy being taught about "adult" rules that help making cycling safer. Examples of these rules include:

- 1 Stop at the end of every driveway, sidewalk, or path to Stop, Look, and Listen.
2. Be predictable when you ride, without swerving or hitching a ride on another moving vehicle.
3. Yield the right-of-way — cars have to stop

for pedestrians, and so do you.

4. Be seen — wear light colored clothes and a bright helmet, and use lights at dusk and nighttime.

5. Obey traffic laws, signal when turning, and always ride on the right side of the road.

As Rep. Sabo said at that March 1997 hearing, "I think the growth of and the use of the bicycle is not only good transportation policy but also good recreation policy. It serves both roles." It is everyone's responsibility to help keep bicycling safe, too.

The League's Effective Cycling program has certified instructors throughout the country. To receive contact information for instructors in their state or area, readers may send a self-addressed, stamped envelope to LAB/E.C., 190 W. Ostend Street, Suite. 120, Baltimore, MD 21230-3755 (or check the Internet at <http://www.bikeleague.org>).

Recommendations

We can have safer roads for bicycling — if transportation planners, bicycle riders, and drivers accept appropriate responsibilities for making communities safer. The Bicycle Federation of America has developed a four point plan to make our roads safer for bicycling — four points aimed at making roads better and drivers and bicyclists smarter.

- *Good roads.* Bicycle riding can be made safer if roads are built to accommodate all users — bicycle riders, pedestrians, and automobiles. Neighborhood roads must be planned to control speeds to appropriate levels, and all roads must provide space for bicycles
- *More bicycle lanes and trails.* Bicycle lanes and trails provide safe spaces for bicyclists to ride.
- *Better drivers that obey traffic safety laws.* Drivers are at fault in a large number of bicycle accidents. In order to keep bicycle riders safe, drivers must be adequately educated about safe driving — and sharing the road with others — and traffic laws that protect bicycle riders, walkers, and drivers must be adequately enforced.
- *Smarter and better prepared bicyclists.* Bicycle riders (children and adults) must receive appropriate education in how to ride safely, and all riders must have adequate safety equipment — helmets, lights, reflectors, etc.

All of the elements of this four point plan can be addressed by improvements in ISTEA. ISTEA has provided vital support for bicycle use and bicycle safety and our findings indicate that improvements to the law can make our streets and highways safe for bicyclists. To ensure that this goal is met, in the reauthorization of ISTEA Congress must:

- Double the amount of money in ISTEA that is dedicated to bicycle facilities and projects.
- Preserve and expand ISTEA's funding framework and planning provisions especially for bicycles and pedestrians. Congress must preserve ISTEA's key planning provisions, maintaining eligibility for bike and pe-

THE BENEFITS OF BIKE LANES

Like Davis, CA, the city of Corvallis, Oregon made a significant effort to make their community bicycle friendly even before ISTEA went into effect. This effort paid off in terms of increased bicycling and safer streets for bicyclists.

Bike Lanes as an Encouragement To Bike

If we are to promote bicycling as an alternative to the automobile for short trips around town, newcomers to bicycling must feel welcome on the streets. Bike lanes are inviting and act as a host. They tell would-be cyclists that it is OK to use the streets you've been driving on all these years. Wide outside lanes do not have the same effect!

Oregon has had poor results with signing routes that have not been modified to make bicycling easier. Indeed, the bikeway program is proposing to drop the use of the white-on-green Bike Route sign altogether.

In Corvallis, Ore., over 90% of the arterial and collector streets have striped bike lanes. This leads to an unparalleled feeling of ease: whether riding a bike or driving a car, the behavior of others is predictable. When riding on the few major streets yet to be striped with bike lanes, one can "share the road" with confidence as most local drivers know how to pass bicyclists prudently.

— By Michael Ronkin, Bikeway Specialist, Oregon D.O.T.

Reprinted From Pro Bike News. March 1993.

destrian projects in ISTEA programs, and expanding dedicated funding programs. The Enhancements program, the largest source of funds for bicycle projects, should be expanded from 2 percent of the total federal transportation budget to 3 percent. Proposals that would allow states to transfer this funding to non-Enhancements activities such as new highways must be rejected. Funding for the CMAQ program should also be expanded.

- Ensure appropriate treatment of bicyclists and pedestrians in transportation projects by requiring that all highway and transit projects provide appropriate accommodations for bicycle riders and pedestrians. While ISTEA allows funding of roadway improvements such as bike lanes and wide curb lanes, many highway projects fail to include any accommodations for bicycles and pedestrians. ISTEA's new provisions must ensure "good roadway design" —

ACCIDENTS WANE WITH BIKE LANES

Bicycle accidents dropped by more than half in the year since Corvallis installed 13 miles of on-street cycling lanes, according to city engineers. Complaints about the system are also down, Traffic Engineer Brian Fodness said today.

“Every once in a while we hear some rumbling,” Fodness said, “but many more comments are of a positive than negative nature— I think the community has adjusted”.

Fifteen more miles of bike lanes are on the drawing board and will be installed when money is available, he said.

When the first lane-striping program started in mid-1981, the City Council asked for a one-year progress report. This report was to go to the council today. It shows:

- Sixteen bicycle accidents were reported between October 1981 and September 1982, down from 40 the year before.
- Of those 16 accidents, only five occurred on streets with bike lanes and those all involved bikes being ridden after dark without lights.
- Bicyclists are for the most part using the lanes, except when the lanes are blocked by fallen leaves, debris, or illegally parked cars.

- Ghosts of old pavement markings still show through in some places, but addition of extra reflection markings has helped solve that problem.
- As their budget allows, police are ticketing cyclists who break traffic laws, such as requirements to ride on the right and stay off downtown sidewalks.
- Where the new lanes took parking spaces, most motorists have found other places to park.

Only five houses were left without any parking, on or off the street and city engineers have helped owners solve that problem, Fodness said.

“What we’ve tried to do is identify ways owners could make improvements to their own property” Fodness said. “Most of them were pretty easy to satisfy. A couple were a little bit more difficult”.

It took a while, Fodness said, but both cyclists and motorists seem to be getting used to the lanes. Education programs sponsored by the city, schools and local cycling groups have helped, he said, and those programs will continue.

Reprinted from the Corvallis Gazette-Times, Dec. 4 1982

that is, if bicyclists and/or pedestrians are permitted on a street or highway, then appropriate provisions must be included to accommodate such users. Similarly, ISTEA must guarantee that transit system projects accommodate bicyclists.

- Improve the transportation planning and implementation process to better accommodate bicyclists, by ensuring that bike projects included in transportation plans are implemented at least at the same rate as improvements for other forms of transportation.
- Ensure that bicyclists and pedestrians get their fair share of federal safety dollars, and make ISTEA's safety programs responsive to the safety needs of non-motorized travelers. ISTEA safety funds must be allocated to bicycle and pedestrian safety programs at a rate that is equal to the percentage of bicycle and pedestrian fatalities nationwide. While ISTEA's enhancement and CMAQ programs have provided a significant source of money for bicycling, bicyclists and pedestrians have not received their fair share of support from other ISTEA programs — especially when compared with other safety priorities. For example, virtually no money has been used from ISTEA's safety

programs (known as the STP safety set-aside and the Section 402 program) to improve bicycle safety and bicycle education.

- Adequately fund measures to ensure that bicyclists and drivers receive appropriate safety education and aggressively enforce traffic safety laws designed to protect bicycles and pedestrians.
- Establish a national goal of making bicycling safer and more prevalent. Congress should establish a national goal of making bicycling safer, and develop an incentive program for transportation safety based on measurable changes in a state's bicycle use and fatality rate. This will create financial incentives to improve bicycle safety through a dedicated fund linked to measurable improvements in reductions in accidents and fatalities.
- Collect more accurate and detailed data on bicycling and walking. Bicycle safety efforts are hindered by the widespread lack of reliable and comprehensive data. There is no comprehensive information on bicycle miles traveled, as there is for Vehicle Miles Traveled. Little is known about how much and how often people

bike how these factors vary with in and among differing communities. There is also little information available on the effectiveness of bicycle safety measures such as helmets and lights. The reauthorization of ISTEA presents an ideal opportunity to fill this in-

formation vacuum by requiring that US DOT collect better, more detailed and more accurate data on levels of bicycling and walking, as well as injury and fatality rates and the relative risks faced by bicycle riders and walkers.

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