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ISTEA [Intermodal Surface Transportation Efficiency Act] [Folder 1] [2]

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ISTEA REAUTHORIZATION PROGRAM

DOT PROGRAM

(\$ in millions)

1998 1999 2000 2001 2002 2003

HIGHWAY INFRASTRUCTURE

National Highway System	4,800	5,063	5,201	5,310	5,307	5,303
Interstate Maintenance	4,800	5,063	5,201	5,310	5,307	5,303
Surface Transportation Program	7,244	7,640	7,849	8,013	8,009	8,002
Transportation Enhancements	500	500	500	500	500	500
Bridge	3,000	3,000	3,000	3,000	3,000	3,000
Security	0	0	0	0	0	0
Long. Mitigation/Air Quality Imp.	1,029	1,029	1,029	1,029	1,029	1,029
Recreational Trails	15	15	15	15	15	15
Scenic Byways	20	20	20	20	20	20
Planning/Administration 1/	Takedown	Takedown	Takedown	Takedown	Takedown	Takedown
ITS/ITL Integration	200	200	200	200	200	200
HWA R&T	357	357	357	357	357	357
Acq. Lands	625	625	625	625	625	625
R	250	250	250	250	250	250
Tax Evasion	5	5	5	5	5	5
Err. Highways	(48)	(48)	(48)	(48)	(48)	(48)
Long. Pricing	15	15	15	15	15	15
ITS	30	30	30	30	30	30
State Infrastructure Bank	250	250	250	250	250	250
MTF	8	8	8	8	8	8
Credit Reform Program	250	250	250	250	250	250
Gateway Border Crossing Pilot Program	50	50	50	50	50	50
NSA Strategic Plan'g R&D & Intmod. Res.	35	35	35	35	35	35
Woodrow Wilson Memorial Bridge 3/	67	67	67	67	67	67
Appalachian Highways	200	200	200	200	200	200
Other Agency	500	500	500	500	500	500
Highway Infrastructure Total	24,249	25,171	25,656	26,038	26,028	26,013

TRANSIT INFRASTRUCTURE

New Starts	850	1,000	1,050	1,050	1,050	1,050
Rail Mod.	0	0	0	0	0	0
Bus	0	0	0	0	0	0
Formula Capital	4,142	4,292	4,442	4,442	4,442	4,442
Transit Infrastructure Total 2/	4,992	5,292	5,492	5,492	5,492	5,492

RAIL INFRASTRUCTURE

AMTRAK Capital (HA)	734	789	799	811	823	836
High Speed Rail (HA)	84	84	84	84	84	84
Rail Infrastructure Total	818	873	883	895	907	920

CONSOLIDATED SAFETY

Operations & Research	265	277	288	299	309	319
Hwy. Traffic Safety Grants	368	376	381	384	384	384
Motor Carrier Grant	150	150	150	150	150	150
Flexible Hwy. Infrastructure Safety	500	500	500	500	500	500
Integrated Safety Planning	50	50	50	50	50	50
Consolidated Safety Total (HA)	1,334	1,353	1,369	1,383	1,393	1,403

TOTAL TRUST FUNDED 31,380 32,689 33,400 33,808 33,820 33,828

GENERAL FUND PROGRAMS

Transit Operating Expenses	500	500	500	500	500	500
Amtrak Operating Expenses	355	292	242	192	142	142
GENERAL FUND TOTAL	855	792	742	692	642	642

1/ Includes funding for planning and admin. as a takedown from contract authority as now and estimated at \$750 million.

2/ Includes funding for admin, planning, and R&D through takedown of about \$210 million.

3/ To replace existing structure of the Woodrow Wilson Bridge; final amount to be determined in ongoing negotiations.

ISTEA REAUTHORIZATION PROGRAM OPTIONS 1/
(\$ in millions)

11/05/96

	OMB Target 1/	DOT PROGRAM	STEP 21/APTA 2/
<u>HIGHWAY INFRASTRUCTURE</u>			
National Highway System	4,000	4,800	
Interstate Maintenance	4,000	4,800	
Surface Transportation Program	5,339	7,244	
Transportation Enhancements	348	500	
Bridge	2,088	3,000	
Equity	0	0	
Cong. Mitigation/Air Quality Imp.	716	1,029	
Recreational Trails	15	15	
Scenic Byways	13	20	
Metro Planning/Administration	Takedown	Takedown 3/	
ITS/ITL integration	150	200	
FHWA R&T	200	357	
Fed. Lands	426	625	
ER	100	250	
Tax Evasion	5	5	
Terr. Highways	(40)	(48)	
Cong. Pricing	15	15	
BTS	30	30	
State Infrastructure Bank	225	250	
MTF	8	8	
Credit Reform Program	100	250	
Gateway Border Crossing Pilot Program	0	50	
RSPA Strategic Plan'g R&D & Intmod. R	10	35	
Woodrow Wilson Memorial Bridge 5/	67	67	
Appalachian Highways	0	200	
Other Agency		500	
Highway Infrastructure Total	17,855	24,249	27,207
<u>TRANSIT INFRASTRUCTURE</u>			
Formula Capital Grants	1,725	0	0
Disc. Grants	1,691	0	0
New Starts	0	850	820
Rail Mod.	0	0	820
Bus	0	0	410
Formula Capital	0	4,142	2,457
Transit Infrastructure Total	3,416	4,992 4/	4,507
<u>RAIL INFRASTRUCTURE</u>			
AMTRAK Capital (HA)		734	
High Speed Rail (HA)		84	
Rail Infrastructure Total	0	818	0
<u>CONSOLIDATED SAFETY</u>			
Operations & Research	55	265	65
Hwy. Traffic Safety Grants	187	368	218
Motor Carrier Grant	178	150	
Flexible Hwy. Infrastructure Safety	500	500	
Integrated Safety Planning		50	
Consolidated Safety Total (HA)	920	1,334	284
TOTAL TRUST FUNDED	22,178	31,380	31,998
<u>GENERAL FUND PROGRAMS</u>			
Transit Operating Expenses		500	
Amtrak Operating Expenses		355	
GENERAL FUND TOTAL		855	

OMB Target 1/ 1997 President's budget estimates for 1998. Reduction in 1998 of 8% from 1997 levels, further changes in the outyears.
 DOT PROGRAM Obligations increase then growth at rate of income.
 STEP 21/APTA 2/ STEP 21 (Warner) for highway program, APTA for transit, safety at DOT level.

NOTE: PROGRAM FUNDING REPRESENTS ESTIMATED FY 1998 FUNDING ONLY.

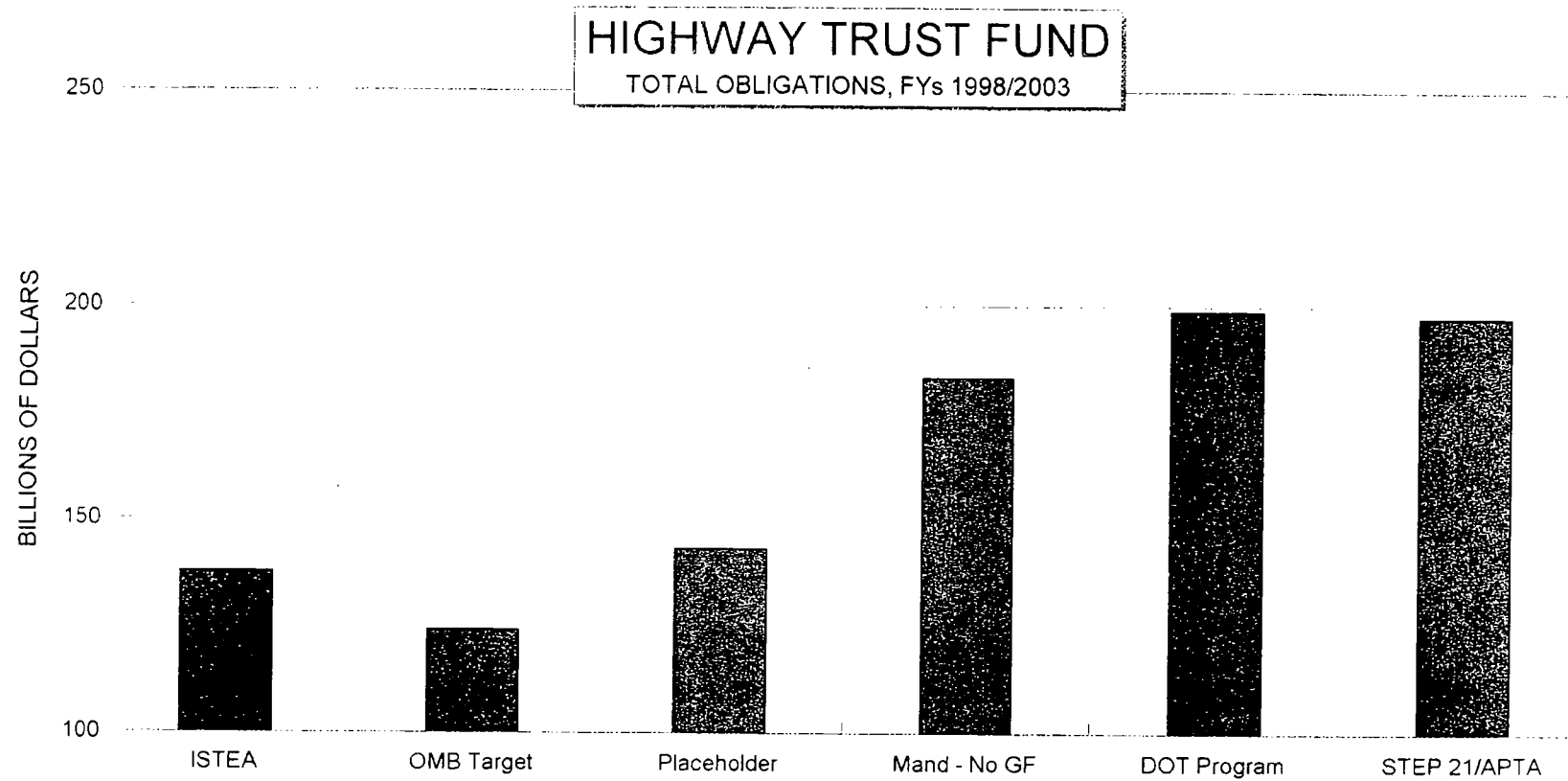
1/ 90% equity is not achievable at OMB Target Level.

2/ Excludes Access program that can not be calculated now.

3/ Includes funding for planning and admin. as a takedown from contract authority as now and estimated at \$750 million.

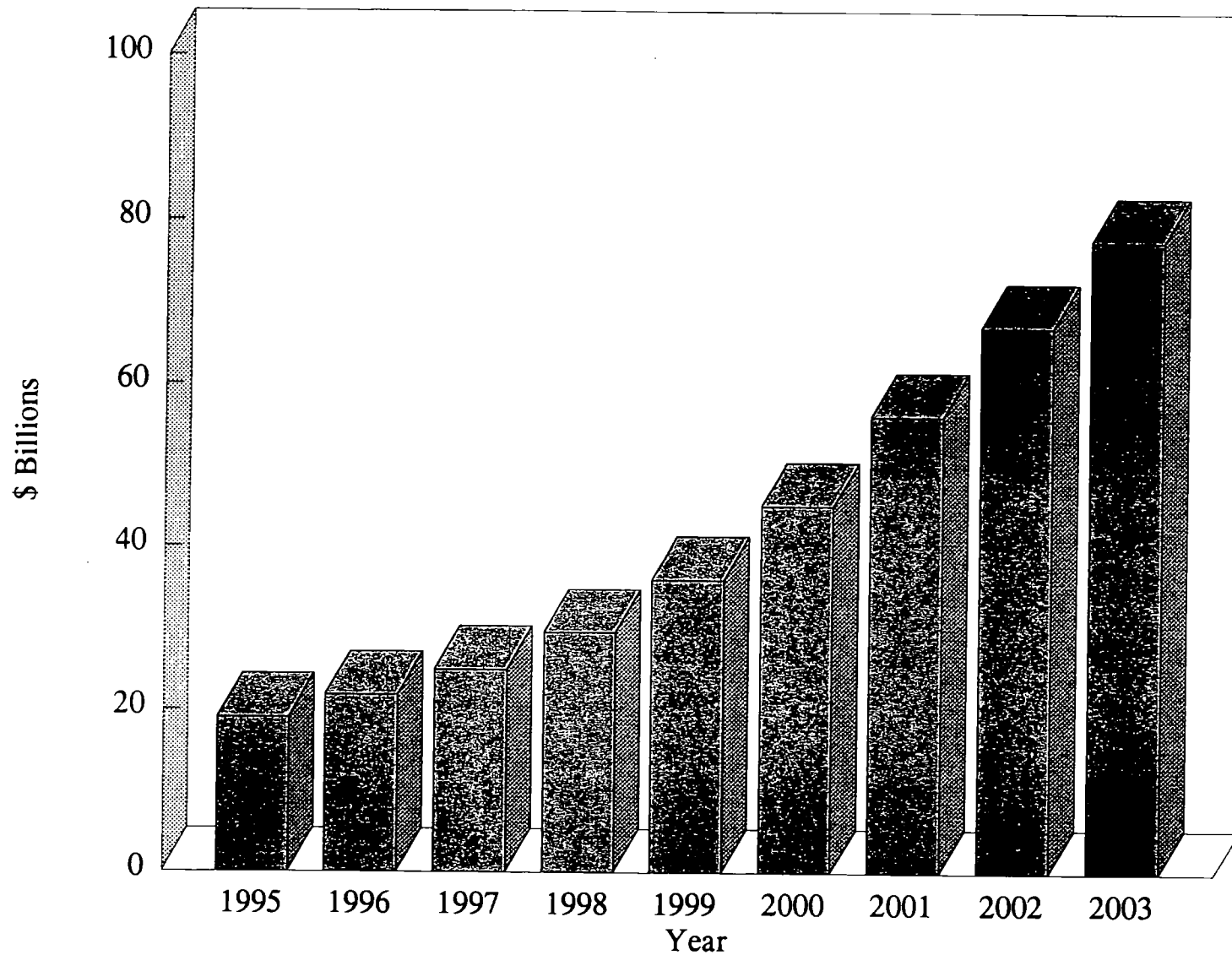
4/ Includes funding for admin, planning, and R&D through takedown of about \$210 million.

5/ To replace existing structure of the Woodrow Wilson Bridge; final amount to be determined in ongoing negotiations.



HTF Cash Balance at OMB Targets

1995 - 2003





E. Intermodal Projects

New York Harbor Freight Ferry - A coalition of New York and New Jersey transportation agencies is using CMAQ funds to take trucks off of the region's highways. Cargo shipments between the Red Hook freight terminal in Brooklyn, NY and Port Elizabeth, NJ rely heavily on the Gowanus Expressway in New York. Construction on the expressway will reduce traffic lanes by up to 50 percent for the next seven years. Substantial congestion is expected on the highway throughout the duration of the project. Delays will also be increased on alternate routes as drivers change their travel patterns to avoid the construction site.

In order to alleviate congestion on the Gowanus Expressway and other regional highways, as well as to expedite cargo transfers between the Red Hook and Port Elizabeth, a coalition of regional transportation agencies developed a ferry for intra-harbor freight traffic. The coalition used \$8.6 million in CMAQ funds to support the \$10.9 million total cost of the project. The ferry service provides direct and dependable transfers between the two facilities.

As a result of the institution of a ferry between two of the region's primary shipping terminals, tens of thousands of trucks trips have been eliminated. Regional emissions of nitrogen-oxides, ozone, and particulate matter have all been reduced due to both decreased congestion on the area's roadways and eliminated truck trips. The reduction in emissions will help the metropolitan area in its efforts to meet national air quality standards, while the reduction in traffic will ease the nuisance of delays to residents and commuters.

Additional examples of successful, environmentally-protective intermodal projects:

- ◆ **Maine's CMAQ-funded Intermodal terminal:** Maine used public/private, and CMAQ money to fund a new intermodal terminal which will reduce highway traffic as far away as Chicago.
- ◆ **Worcester's Intermodal Transportation Center** - The city of Worcester is addressing comprehensive transportation goals in an historic setting. Built in 1911, Worcester's historic Union Station at Washington Square is being rehabilitated into a comprehensive Intermodal Transportation Center. Once a magnificent monument to a thriving city, Union Station in the last few decades has been abandoned due to a lack of funding. But Worcester, the second largest city in New England, has now embarked on a \$1 billion economic development endeavor that requires modern and efficient transportation facilities.

The Intermodal Transportation Center will assist Worcester's air quality plans and strengthen its role as a regional center. It will provide efficient public transportation to downtown locations like the Medical City complex, the Convention Center, and the new Worcester Mall. The project, managed by the Worcester Redevelopment Authority (WRA), will improve regional air quality by encouraging the use of mass transit—especially the Massachusetts Bay Transportation Authority commuter rail extension—providing easy access for rail, bus, and shuttle services, enhancing bicycle and pedestrian access to the downtown area, and improving traffic flow.

Union Station is built on two railroad lines which can meet present and future rail needs in all directions. The station is easily accessible and conveniently located near major downtown development projects and I-290.



F. CMAQ

1. Maricopa Education and Outreach - To combat harmful emissions from motor vehicles in Maricopa County, Arizona, the Regional Public Transportation Authority (RPTA) and the county are taking the fight to the air waves. The RPTA's "Clean Air Campaign" and the county's "Trip Reduction Program" are educating the public through paid radio and billboard advertising and stories on the local news shows. The goal: to get commuters out of their cars and into more environmentally friendly modes of transportation.

The Campaign promotes the use of alternative modes of travel, telecommuting, and a shortened work week as ways to reduce air pollution from motor vehicles. Over the past several years publicized events have included *Arizona Clean Air Week*, *Free Bus Morning*, and *Ride Your Bike Week*. The campaign also furthers its cause through slogans promoting alternative modes of travel.

In a cooperative effort, Maricopa County is targeting employers. Its mandatory Trip Reduction Program is aimed at reducing solo commuting by employees. Arizona law requires employers in the Phoenix metropolitan area with more than 50 employees to establish such programs. The RPTA assists the county in providing training and technical support to employers establishing these programs.

By targeting commuters and the general public, both the Clean Air Campaign and the Trip Reduction Program have been successful in promoting alternatives to commuting alone. A telephone survey to assess participation has been done annually to measure opinions and commuting behavior. The 1995 study found that the percentage of employed respondents who use alternative modes of transportation at least 1 day a week has increased 65 percent since the beginning of the Campaign in 1989, from 25 percent to 33 percent. And the number of alternative mode trips made by commuters increased from 14 percent in 1989 to 26 percent in 1995.

2. Glendale Parking Management - In a public-private partnership with the Glendale Transportation Management Associates, two private companies have implemented a 3-year demonstration program to reduce the number of employees driving to work alone. The companies reward employees who choose alternatives to driving alone—carpools, vanpools, walking, bicycling, and transit. The program combines a graduated parking charge for all employees with incentives such as prizes, awards, and—one of the most valued incentives—the Guaranteed Ride Home Program, for participating employees. As evidence of its success, this project earned the FHWA's 1995 Environmental Excellence Award in the CMAQ Program category.

Additional examples of successful CMAQ projects include:

- ◆ **Freeway Service Patrol** - Managed by the Metropolitan Transportation Commission (MTC) the FSP alleviates long delays caused by disabled vehicles—which account for 50 percent of the traffic congestion in the metropolitan area. A fleet of 52 FSP trucks patrols more than 200 miles of the Bay Area's most congested freeways, clearing over 9,000 incidents every month. Aided by the latest communications technology, the FSP truck drivers rescue stranded motorists. By alleviating start-and-stop travel and vehicle idling due to traffic jams, the FSP has also decreased overall fuel consumption and helped reduce harmful air pollution from motor vehicles.
- ◆ **CNG Buses in Milwaukee** - CMAQ funds have been instrumental in the purchase of natural gas fueling stations in Milwaukee as well as road improvements to improve congestion. Both projects are important in the areas goal of improving air quality.

—
Diane —

Thx for the
loan. When
you get a
moment, lets
chat.

Michael

ISTEA ***Reauthorization***

& ***the Environment***

Diane Regas
Domestic Policy
Council

July 26, 1996



Today's briefing

- ◆ What EPA is doing
- ◆ What you can do
- ◆ The revolution in federal transport funding:
the Intermodal Surface Transportation and
Efficiency Act of 1991
- ◆ Why EPA wants to *keep* that revolution, and
its foes



EPA's basic ISTEA messages

1. ISTEA supports national goals of environmental and health protection
2. ISTEA protects rights of cities and citizens to participate in decisions that affect them



How EPA is preparing for re-authorization

- ◆ ISTEA works *today*
 - We're cataloging ISTEA environmental success stories from across the country--ISTEA stories even state highway departments believe are successes.
- ◆ Sure, there could be some streamlining
 - We're devising ISTEA administrative fixes
- ◆ Changing is bad for people and the environment
 - We're analyzing environmental impacts of proposals
- ◆ We can make ISTEA even better
 - We're identifying opportunities for even better integration of ISTEA and the environment
 - ◆ Brownfields set-aside?
 - ◆ Wetlands restoration set-aside?
 - ◆ Buffer zones for riparian areas; greenways?



Why should the Administration like ISTEA?

- ◆ Local control is popular

- ISTEA gives citizens a *voice* in the biggest impacts on their community.
- ISTEA *enables locals to build* their ideas (including environmentally protective ones).
- Best example: the Enhancements Program has been wildly popular.

- ◆ Money to cities is popular

- ISTEA directs a small amount of money straight to cities. This is being used for very popular projects.
- Of the money going to state highway departments, a disproportionate amount goes to rural areas. Weakening ISTEA would allow state DOTs to skew this even further, to cities' loss.

- ◆ ***Thus, cities and mayors uniformly support ISTEA principles.***

- That is, the population centers support it, while rural spaces tend not to. But even many rural areas have benefited from the local control under ISTEA.



What you can do

◆ Protect ISTEA

- Help EOP understand the value of ISTEA principles...
 - ◆ to the environment
 - ◆ to livable communities
- and fight block grant-style proposals which would return all power to state highway departments.
- We're here to help you make that case.

◆ Have campaigners recognize—and appear at—community-friendly transportation projects.

- These are at least as salient to people as 911 response.
- New facilities are being dedicated all the time. We can find places which fit your requirements.



ISTEA: A Revolution in Surface Transportation Policy

- ◆ ISTEA changed funding & planning in four areas:
 - **Decentralization** for more local control of funding and project selection
 - **Increased flexibility** in the use of federal funds
 - **Enhanced participation** for more interaction between local, state, and federal planners, and more public involvement
 - **Integration of environmental and social planning** with transportation planning
- ◆ These changes applied to state DOTs, MPOs, and other funding recipients.



Why EPA cares: Transportation tends to interfere with EPA mandates

- ◆ Clean Air Act: unbalanced transportation policy works against attainment
 - 60 million still live in non-attainment areas. Transportation is the main source of criteria pollutants and air toxins.
- ◆ Poor transportation policy works against the Clean Water Act
 - Roads tend to produce runoff, which tends to damage drinking water and river health => an increased need for expensive treatment facilities.
 - Increased construction tends to produce habitat destruction, including wetlands loss.
- ◆ ...fragments habitat
 - EPA's Unfinished Business says habitat is one of EPA's largest challenges.
- ◆ ...and interferes with the US climate commitment
 - Transportation is 30% of US greenhouse gas emissions, and the fastest growing sector. These emissions are a large part of the reason the US is not fulfilling its Climate Change Action Plan commitment.



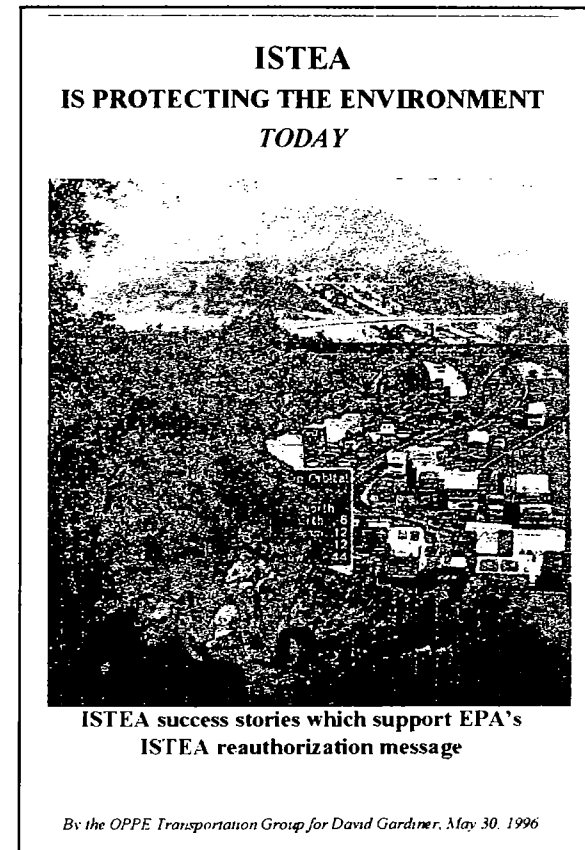
ISTEA helps protect the environment

- ◆ *Directly protective through funding:* ISTEA provides certain funds specifically for environmental enhancement and protection.
 - \$3 billion in Enhancements
 - \$6 billion in Congestion Mitigation and Air Quality
 - \$3 billion in planning funds
- ◆ *Directly protective through rules:* Requires recipients to consider environmental and social impacts in long-range planning.
- ◆ *Indirectly protective through rules:* Empowers cities and citizens. ISTEA gives planning power to cities and citizens, who *tend* to adopt balanced transportation plans.



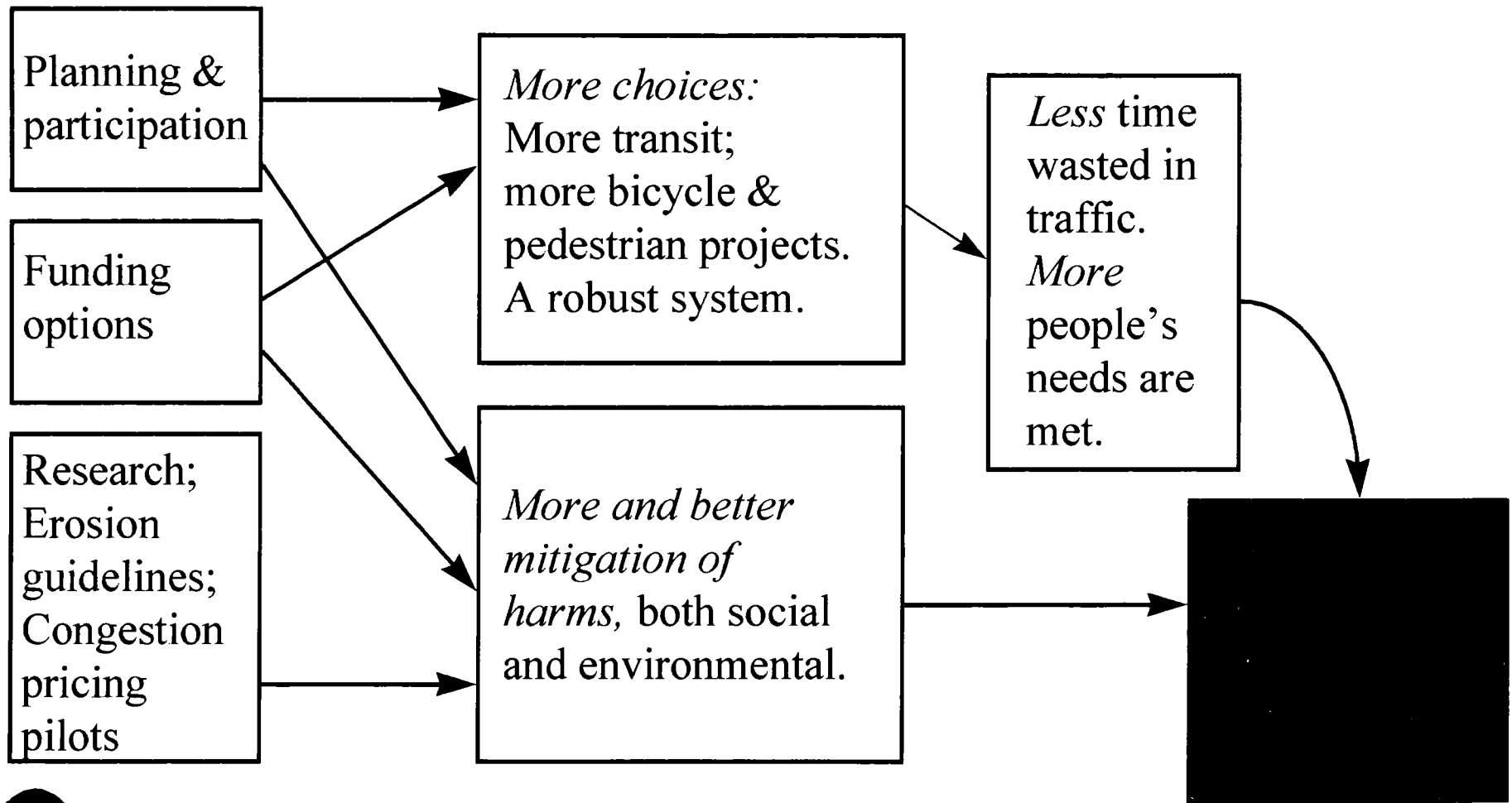
ISTEA helps protect the environment, *continued*

- ◆ *It's flexible:* ISTEA provides opportunities to fund environmentally-sound transportation.
- ◆ *It's financially empowering:* Gives money to cities and states, who can spend funds so as to meet their needs.
- ◆ All of this means that ISTEA is producing success stories today:



In sum:

How ISTEA benefits the environment



Current proposals target the revolution

- ◆ American Association of State Highway and Transportation Officials (AASHTO): No rules
 - National vote called for a removal of most federal transportation oversight.
 - No planning or performance requirements.
 - But still give federal tax money to states.
- ◆ Highway Users' Federation: Turn back the clock to old rules
 - Would eliminate air quality funds, transit funding from the Transportation Trust Fund, enhancement funding, planning requirements and *most other progressive features of ISTEA*.
- ◆ All the provisions targeted for elimination either benefit the environment directly, or can be used to protect the environment.





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PRIORITIES FOR ISTEA REAUTHORIZATION

12/13/96

Preserve and strengthen ISTEA planning requirements. Metropolitan and Statewide Planning requirements should be retained to ensure consideration of the long-term (20 year) impacts of projects on the environment and other factors, evaluation of alternatives, and public involvement. These should include a public right to know the detailed assumptions and impacts of transportation plans and programs. These should include minimum performance criteria for transportation modeling in mid and large metropolitan areas to ensure analytically sound performance evaluations. These planning requirements are critical linkages necessary to make the Clean Air Act conformity process meaningful. A 3 year time limit should be placed on further grandfather exemptions from ISTEA and CAA requirements for transportation projects that have not yet received final federal funding and approvals or begun construction.

Provide incentives for innovative problem solving through funding. ISTEA funds should be set aside or at least made explicitly eligible to support specific activities that reduce growth in travel demand (such as the planning and development of Transferable Development Rights (TDR) programs and other zoning and urban/street design and management strategies) by local, regional, and state governments and non-governmental organizations (NGOs). NGOs should be made explicitly eligible to be primary project sponsors for ISTEA grant funds. Funding incentives should be included in the ISTEA funding formula to reward achievement of outstanding performance in meeting important national goals, including VMT reduction, highway maintenance, and enhancement of environmental quality. Funding incentives should also be included for enhancement of transportation and land use planning tools and data systems to support local and national performance measurement and evaluation. Preserve dedicated environmental funding in the Congestion Management and Air Quality (CMAQ) Improvement Program and support transportation conformity requirements.

Encourage market-based transportation pricing reforms. ISTEA should remove restrictions that prevent the application of tolls on Interstate and federally funded highways and encourage time-of-day variable road tolls (also known as congestion pricing) that apply market principles to enhance mobility, environmental protection, and economic vitality. Continued funding and expanded authorization for congestion pricing is necessary to build on the success of the past five years. Federal tax code change is needed to encourage equal tax treatment of commuter subsidies.

EDF has prepared more detailed materials discussing these and related issues, available upon request. Contact Michael Replogle 202-387-3500.

JOBS, COMMUNITIES & THE ENVIRONMENT

AN AGENDA FOR ISTEA REAUTHORIZATION

ISTEA made the biggest change to federal transportation policy in a generation. In 1997, we need to both protect and build on ISTEA's reforms. The administration can play a big role in this process by adopting 3 simple but powerful themes for ISTEA II:

Transportation is about Jobs -- but not just jobs building roads. It's about jobs from a healthy economy, jobs from fixing crumbling roads, bridges and transit systems, and jobs from getting people off welfare and into work.

Transportation is about Communities -- it can make them better places to live and work, or it can hurt them. For too long we have focused on *projects* and ignored the needs of *communities*. By listening to people, we can spend our money in ways that make communities more livable and more prosperous.

Transportation is about the Environment -- inefficient transportation hurts the environment, whether through air pollution, wetlands loss or climate change. The environment is a matter of national concern, and the federal transportation program should include a major commitment to improving it.

First Things First: Protecting ISTEA

Flexibility. ISTEA allowed almost half of highway funds to be used for air quality, transit and other environmentally friendly alternatives.

Fair Decision Making. ISTEA gave authority to state and local officials, and set rules they must follow when spending flexible funds: new *planning requirements* that put attention on the energy, land use and other effects of transportation, a guarantee of *public involvement*, a requirement for *fiscally constrained planning*, and *Clean Air Act conformity*

New Funding Programs. ISTEA created 3 programs that are spurring creativity at the state and local level: the *Congestion Mitigation & Air Quality* program (CMAQ), the *Transportation Enhancements* program, and *targeted funds for metropolitan areas*.

Guaranteed Money for Maintenance. ISTEA's Bridge and Interstate Maintenance programs make sure some funds go to preserving the highway system.

Building on ISTEA

A New Emphasis on the Environment. Both as a matter of message and of substance, ISTEA II should deal with the environmental effects of transportation. New

funding should be made available to mitigate wetlands impacts, to make buying alternative fuel buses the same price as conventional ones, and to make more effort to provide alternatives to sprawl development.

Jobs, Welfare Reform and Transportation. Transportation should help get people from welfare to work, not be part of the problem. A new effort should be made to support job-link programs like those funded by HUD's "Bridges to Work" pilot program, and programs to promote transportation efficiency by bringing job growth to accessible locations that are often economically depressed.

Performance Incentives. Transportation spending needs to be guided more by real performance and less by red tape. We propose establishing three performance measures: one for the condition of the Interstate system, one for transportation safety, and one for environmental performance. States should be held accountable for their results, with the best performers being rewarded, and the worst being asked to do better.

Threats to ISTEA

Highways Only. The various highway lobby groups want to curtail flexibility, eliminate funding for transit, CMAQ and Enhancements, and force states to spend most federal money on highways.

Block Grants. Many state DOTs want federal money with no strings attached, even though ISTEA gave them unprecedented flexibility. The federal government has a responsibility to target some of its money to priority activities, assure fairness and keep local government as a funding partner.

Bad Budget Numbers. The Administration can be a powerful force for good in the coming debate, but a budget that causes huge accumulations in the Highway Trust Fund will prevent it from being a player. A huge build-up in the trust fund could lead to a partial repeal of gas taxes to bring revenue in line with spending. This happened to the Airport Trust Fund in 1995. The result would be the worst of all possible worlds -- an ISTEA reauthorization bill without an administration imprint, no help for the deficit, and less money to invest in jobs, communities and the environment

ADDRESSING WELFARE DEPENDENCY WITH TRANSPORTATION

The recent welfare bill has made the task of getting people off welfare and into work even more urgent than before. In its search for ways to assist this transition, the Clinton administration should look to transportation. Federal transportation funds can be used to give welfare recipients better access to jobs, and to make communities with high levels of welfare dependency more attractive to job creation. Reauthorization of ISTEA presents an opportunity to provide funding for these activities.

Background

A significant share of the welfare dependent population is concentrated in urban and older suburban areas with high unemployment, few job opportunities and poor access to job growth centers. Getting and holding a job requires more than basic skills and daycare; poor access to suburban employment centers can be a major barrier.

Access to a car is least prevalent among the lowest income classes; nearly 40% of workers with annual income below \$10,000 don't commute by car, compared to around 20% in the relatively modest \$25,000 to \$35,000 income range¹. This is largely because of cost; the American Automobile Association estimates that in 1995 it cost an average of \$6500 to own and operate one car. By necessity, low income workers spend less, but even a fraction of this amount can be too much for a worker on a minimum wage salary of \$9880 per year. In 1977, the median price of a new car was 18 weeks salary for the average worker. In 1991, it was 25 weeks salary².

Although low income workers use public transportation more than others, transit is often a poor provider of access to the suburbs, where most job growth occurs. Traditional suburb-to-central city "AM inbound; PM outbound" service is a big revenue source for transit systems, and routes are structured to serve the middle income riders that use these routes. Use of certain kinds of transit -- commuter trains, subways and elevated rail -- is actually higher among middle income workers than the poor. Low income "reverse commuters", who leave the central city or inner ring suburb in the morning to reach a suburban job, have limited options. Where service does exist, suburban transit stations tend to be far from the actual workplace, and connector bus or van service is either unavailable or infrequent. Park-and-Ride lots have helped make suburban transit stations accessible to suburban-dwelling commuters, but these investments don't help the reverse commuter.

In addition, transportation investments have contributed to a spatial mismatch between jobs and workers, particularly low income workers. Forty years of highway building at the suburban fringe has bought down the cost of development in those areas to the disadvantage of older communities. In many places, the cost of building new roads -- almost always in low-density exurban areas -- has made it impossible to spend adequate funds on maintaining existing infrastructure. The strong emphasis on road building as a priority for federal funds has led to a program with an unintentional but definite anti-urban bias. In 1994 and 1995, per capita spending of federal road money

in urbanized areas was \$54; in what the Census Bureau calls "non-urbanized areas" - mostly low density outer suburbs -- per capita spending was \$115.³

Proposal

ISTEA II should fund strategies that improve access to jobs for the chronically underemployed. Eligible activities for funding would fall into two general categories:

- 1. Programs that bring people to jobs.** This includes reverse commute and suburban job link programs involving van-pools, buses or fixed rail, and transit voucher programs. Descriptions of two such programs -- Chicago's "Shuttle Bug" suburban job link program and New York City's TransitChek voucher program -- are attached. Similar efforts are currently being funded in five cities by HUD's \$17 million "Bridges to Work" pilot program.
- 2. Programs that bring jobs to people.** This includes a variety of ways to use transportation investments to make troubled communities more attractive to job growth. Examples are joint development agreements to revitalize transit stations and the neighborhoods around them, redevelopment of blighted "brownfields" areas to encourage new businesses to locate in urban areas, and improvements to extensive but poorly maintained rail infrastructure in urban areas together with the location of manufacturing or shipping facilities in these areas. Descriptions of sample projects in the Chicago and Tampa areas are attached.

The program would be run by US DOT in coordination with other federal agencies, possible including the Departments of Labor, HUD and/or HHS, or perhaps the Community Empowerment Board. It would build on experience gained from the Federal Transit Administration's Livable Communities Initiative and HUD's Bridges to Work program. Eligible recipients for grants would include the state DOTs that get most other ISTEA money, but would also include other state agencies, local governments, either through their transportation, social service or economic development agencies, non-profit social service groups and CDCs.

This would not be a pilot program to test these ideas. They have been tested. The purpose of this program is implementation. Accordingly, funding could begin at around \$100 million per year and grow to as much as \$400 million per year.

- Attachments:
1. *National Journal* article "The Reverse Commute", 11/23/96
 2. *New York Times* Op-Ed "From Welfare To Work, Without A Car", 11/23/96
 3. Shuttle-Bug Reverse Commute Program, one-page summary
 4. TransitChek voucher program, one-page summary
 5. Ybor City Streetcar project, one-page summary
 6. Tootsie Roll Factory project, one-page summary

¹ See *Commuting In America II*, Eno Transportation Foundation, Inc., 1996. p.56.

² Ibid, p.40.

³ See *Getting A Fair Share: An Analysis of Federal Transportation Spending*, Surface Transportation Policy Project, 1996, p. 6.

The Reverse Commute

The jobs are in the suburbs. But getting there is hard for inner-city residents without cars or efficient public transit. Experimental programs aim to provide direct transportation to work sites and address such needs as extended child care.

BY ROCHELLE L. STANFIELD

BALTIMORE—Scot T. Spencer was driving along Eager Street one weekday noon in a shabby section of Baltimore's east side, past clusters of men who were hanging out on the corners and didn't look very eager at all.

Spencer, physical development director for the Historic East Baltimore Community Action Coalition, is eager to put them and others to work. But jobs are scarce around here. Even though the typically employment-rich Johns Hopkins Hospital complex is just a few blocks away and this neighborhood is part of Baltimore's empowerment zone—the local target area for the Clinton Administration's urban revitalization scheme—more than half the adult population is unemployed.

So Spencer is about to do something radical, if not downright contradictory, for an organization implementing an empowerment zone program. He's going to look for suburban employment for inner-city residents.

"I'd love to place people in jobs around here," he said. But even though the empowerment zone is spurring employment in the neighborhood, he continued, "the reality is, there probably aren't enough jobs in the city."

In a rare departure from its traditional economic development focus on creation of inner-city jobs, the Housing and Urban Development (HUD) Department is sponsoring a \$17 million, five-city experiment in reverse commuting called Bridges to Work. Baltimore is one of the participants, along with Chicago, Denver, Milwaukee and St. Louis. The experiment arises from a new appreciation at HUD, and among urban advocates generally, of the economic interdependence of cities and their suburbs.

"We cannot think about our inner-city communities as economies unto themselves, even though we think they have substantial economic development potential," Michael A. Stegman, assistant HUD secretary for policy development and research, said. "If you get a job out [in the suburbs] and bring back a good paycheck into your community, you can

do a much better job of supporting the supermarkets, the retail developments that have been missing in your community. You're importing dollars to sustain your neighborhood."

Welfare reform, with its requirement that most recipients find jobs within two years, has increased the urgency of expanding job searches to the entire metropolitan area. But this development was probably inevitable anyway in the face of a new economic geography. The suburbs are where the jobs are. In the 10 largest metropolitan areas, more than two-thirds of all jobs created during the 1980s were in the suburbs. The proportion of blue-collar jobs was even higher. (See chart, p. 2548.)

"You fish where the fish are," said Mark Alan Hughes, vice president of Public/Private Ventures, a Philadelphia-based community and economic development consulting firm, who dreamed up Bridges to Work and is overseeing it for HUD. "You start with the fact that you've got lots of poor people in the cities and jobs moving to or starting up in the suburbs and you've got three options—dispersal: move the poor people out to the suburbs; development: recentralize jobs back in the city; and mobility: just try to connect the dots."

That's easier said than done. In Baltimore, for example, even though short-handed suburban businesses are hungry for the kind of minimally skilled workers Spencer can supply, political, psychological and economic barriers stand in the way.

And an even greater immediate obstacle is this logistical fact of life: You can't get there from here. Unless, of course, you drive a car. And Spencer estimates that at least half the potential workers in East Baltimore don't.

In fact, the reason Spencer was in his car on that weekday noon was to drive a carless reporter from his office to Penn Station in downtown Baltimore. She had to catch an intercity Amtrak Metroliner for the 13-minute ride out to the Baltimore-Washington International (BWI) Airport business district, where jobs are sprouting

faster than the weeds that were uprooted to clear mile after mile of land for industrial parks and warehouse complexes.

The \$8 trip is the only public transit option available at that time of day. It may be luxurious, but it's also expensive and not very convenient. A much cheaper light-rail system runs streetcars into the general area every 15 minutes, but the stations are even farther away from the airport complex.

Although 80 square miles of commercial opportunity surround BWI, all that's visible from its railroad station is a vast stretch of parking lot. Every few minutes, a shuttle bus goes to the air terminal. Nothing goes to most of the job sites.

So the reporter called Neil M. Shpritz, executive director of the BWI Business Partnership Inc., the suburban organization collaborating with Spencer on HUD's suburban job-placement experiment. Shpritz had to bring his own car to pick up the reporter. For the 400 aspiring employees they hope to place through Bridges to Work, Shpritz and Spencer are working on more-efficient arrangements.

Shpritz describes his involvement as purely pragmatic. Of Hughes's three options, mobility is the only practical solution, he said. Employers around BWI "know they have problems finding a relatively low-wage labor force out here, and they know they need a labor force because their businesses are doing well," he explained. "And the segment of the labor force they're looking for—at wages of \$7-\$11 an hour—can't afford houses out here."

With \$1.6 million from HUD through the Bridges to Work program, Spencer is buying vans to whisk his East Baltimore workers out to Shpritz's job sites. That's the physical bridge, but it's only the beginning. The program will also feature a job-placement service, orientation sessions to make the suburbs seem less alien to people who may not have been there before, the guarantee of a free ride home during the work shift in case of emergency and supplemental child care assistance because the commute will lengthen an average workday.

Just to conceive of such a comprehensive reverse-commuting program required breaking out of the narrow mental confines of urban isolationism. To translate this small experiment into a routine part of metropolitan economic life, however, will require leaping a series of other barriers. None is likely to be higher than those imposed by traditional public transit notions and practices.

TRANSIT REVERSAL

Until very recently, to many close observers of the urban scene the phrase



Scot T. Spencer of the Historic East Baltimore Community Action Coalition
He'd like to help people work in the city but says there probably aren't enough jobs there.

"innovative public transit" was a contradiction in terms. Most city systems still operate as they have for decades. A few suburban systems do try new ways to provide transit, but creativity is a slow, difficult process.

The suburban bus division of Chicago's Regional Transportation Authority, called Pace, is one transit agency that has broken out of the mold. "We're just trying to be responsive and flexible," Terrence Brannon, Pace's deputy executive director, said. "A lot of transit agencies just aren't interested in this kind of stuff."

Even Pace didn't set out to be different, Brannon conceded. "The reason we're doing it is because of our charge to serve a suburban market," he continued. "It kind of forces you to become creative, because it's not a good market for transit."

Transit typically accounts for only 2 per cent of suburban transportation. Brannon, who is trying to increase this market share, is banking on city-to-suburb riders to do it. At present, 47 per cent of his riders travel between suburbs, 41 per cent from suburb to city and only 12 per cent from city to suburb. But the outbound ridership increased by 33 per cent during the 1980s, the fastest-growing segment.

Not surprisingly, Pace is to be a major player in Chicago's Bridges to Work demonstration. Also not surprisingly, Baltimore's Mass Transit Administration (MTA) isn't. The Maryland legislature, which heavily subsidizes MTA, requires the transit agency to recover 50 per cent of its costs from fares. So the agency can't establish a new service or even a different route without the assurance of a sufficient number of paying customers.

"In some ways it does constrain us," Harvey Zelefsky, MTA's director of plan-

ning, acknowledged. "But it does keep us honest."

That's not how Spencer would describe it. "You can't create a demand if people can't get down there for a [job] interview in the first place," he said. "It's almost comical that this happens."

Reverse commuting of the kind envisioned in Bridges to Work turns traditional transit planning on its head. The immutable rule of mass transport has been to move a lot of people at once from one densely concentrated place to another. Within cities, where mass transit began and where most of it still operates, that means sending large-capacity vehicles down fixed routes.

The commute from suburb to city requires only a slight variation. The transit operator picks up riders at a central location—a big suburban parking lot that riders reached by car—and travels along a fixed route to the city's business district.

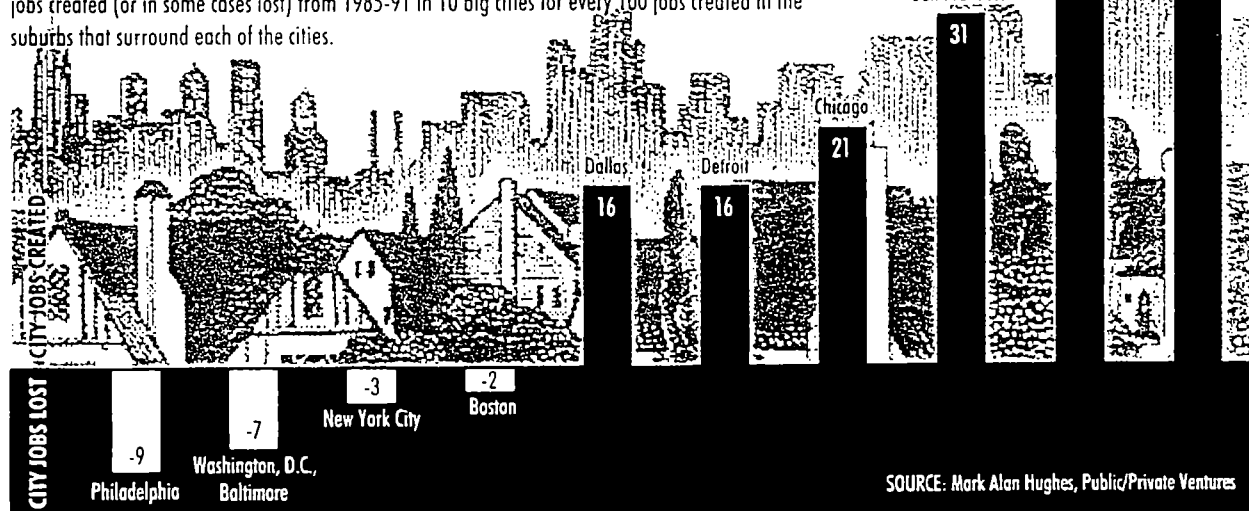
To simply reverse that doesn't work. Just to get to a central pickup point within the city using public transportation could take as long as the total commute would take by car. And what happens at the other end of the ride? "You can't just drop folks at the corner of an expressway and let them walk two miles to work," Joseph Tierney, who is co-directing Bridges to Work for Public/Private Ventures, said.

In Chicago's suburbs, Pace operates between the end of the regular Chicago Transit Authority (CTA) lines out to such major employers as Sears, Roebuck and Co., which four years ago moved its headquarters with 4,000 employees from Chicago's West Side to the far northwestern suburbs.

But that's not a viable solution for most inner-city residents because it means a

Where New Jobs Are: Suburbs

Far more jobs are created in the suburbs than in the central cities. The chart shows the number of jobs created (or in some cases lost) from 1985-91 in 10 big cities for every 100 jobs created in the suburbs that surround each of the cities.



very long commute. A CTA elevated line, for example, runs from the North Lawn-dale section of the West Side out to the edge of the city, and a Pace bus goes the rest of the way to various job locations. "You theoretically could make the connections, but it would take almost two hours to do that. So people just won't use it," said John J. Plunkett, president of Suburban Job-Link, a nonprofit job-training organization in Chicago that pioneered a comprehensive reverse-commuting program for West Side residents 10 years ago. Plunkett heads the Chicago version of Bridges to Work.

Suburban Job-Link, among other things, reduces the commute to 25 minutes by running express buses from the West Side out to job sites. That, ironically, means setting limits. Plunkett restricts eligibility for his program to people who live within three blocks of his bus routes.

"We get people who say, 'I'll get to your bus no matter how far I have to go,'" Plunkett said. "But we know if we apply our restriction rigidly, we're going to have a much happier ridership. People are going to keep their jobs longer because they're not going to have to get up real early in the morning just to hook up with us. It just works better."

Time of day presents another problem. Suburb-to-city transit is designed for the office rush hours. That's not the schedule used by factories, warehouses and other employers of blue-collar workers in the suburbs. Many operate around the clock, and even the day shift starts much earlier than rush hour.

"That's another thing about being flexible," Brannon said. Even if you can transport people for an evening or overnight shift, for example, "if you're not there to pick them up in the morning when they get off of work, you're going to lose them."

There's yet another timetable for job interviews, which typically take place during the day after rush hour. "We found that when our regular transportation was out here to take people to work, that was really no good for people looking for a job," Plunkett said. "So now we run two kinds of transportation."

CROSSING THE BARRIERS

The physical constraints inherent in providing mass transit are the first barrier to cross in placing inner-city residents in suburban jobs, but they're far from the only ones.

"I think it's really important not to make the mistake of saying, 'If we just had the transportation problem solved, everything would be fine,'" said Margery Austin Turner, who recently returned as principal research associate to the Urban Institute in Washington from a stint as deputy assistant secretary at HUD, where she helped plan Bridges to Work. "Transportation is part of the problem, but if you fix that, that would probably be the solution for only a relatively small number of people."

Plunkett solved several problems early in 1995 with the construction of what he calls the Suburban Oasis, a job training-job search site and transit transfer point in DuPage County not far from the Cook

County line. In a breakthrough for the new metropolitan-wide thinking, Chicago helped finance the building and has invested more than \$1 million in the program. "I'm sure eyebrows were raised at both ends, in City Hall as well as the suburbs," Plunkett said.

Among other things, the Oasis provides an island of cultural, ethnic and racial familiarity in an unfamiliar world. The psychological wall between city and suburb is often much higher than job-placement specialists expect it to be. In Baltimore, for example, Spencer is finding a large proportion of potential workers "who say, 'I don't want to leave the city,'" he said. "In trying to understand why, we find it means escaping their comfort margin. It can be distance. It can be family [needs]. It can be race or perceptions of race, but they don't want to escape" that margin of comfort.

In Chicago, Plunkett finds the Oasis a big help in breaking down this barrier of fear. "One of the reasons we moved our orientation to the suburbs is so we can physically demonstrate [the feasibility of working in the suburbs] on the very first day," he said. "Somebody gets on our vehicle [on the West Side] and is whisked out here and it really didn't take all that long—well, that's a surprise in itself. Then we run around some of the industrial areas where our facility is, and they've never seen so many factories in their entire life. So right away, they'll internalize some of the notions that we just used to talk about."

Even so, once they are on the job with-

out cars, they're stuck. That's why an important component of Bridges to Work is a guaranteed ride home in case of emergency or unanticipated overtime. At the BWI complex, Shpritz already provides a similar guarantee for middle-class suburban workers who volunteer to take public transportation as a means to relieve highway congestion and alleviate air pollution. "It gets used less than we expected," he said. "It's really an insurance policy [for the workers], and it works very well."

Then there are economic humps to overcome in reverse commuting. It might cost more to work in the suburbs than closer to home, for example, because of extended child care. Plunkett has not subsidized child care in his Suburban Job-Link program, but Bridges to Work intends to do so. In the Baltimore area, both Spencer and Shpritz see it as a necessary incentive to get potential workers into the program.

Spencer is planning to pay for the additional time a child would need to be cared for because the commute would lengthen the parent's workday. Using a child care center closer to the job would probably not be feasible. "There are some child care facilities out here," Shpritz said. "But they're not cheap. I can't see a \$7-an-hour worker affording them."

Other economic constraints are more subtle. For some suburban commuters, the most efficient form of transportation is a vanpool. In suburban Chicago, Pace operates 250 vanpools, most of them between suburbs. Brannon envisions setting up vanpools for Bridges to Work participants, but there are problems.

Pace's vans are driven by workers who pay for fuel and maintenance with a credit card provided by Pace and keep the vans at home in their own garages. That requires the vanpool drivers to have a good credit history—which usually means a long work history—and a garage.

"A lot of people in Bridges to Work don't have that," Brannon said. "So we're looking at getting some kind of central storage location and fuel and maintenance contracts with, maybe, some local inner-city service stations." Not necessarily a big problem, but one more bump in the road to metropolitan job opportunities.

GUARANTEED FUTURE

Bridges to Work intends to put a total of 1,600 inner-city residents to work outside Baltimore, Denver, Milwaukee and St. Louis and another 1,600 in suburban Chicago. The significance of that number would be lost in rounding off the statistics of the millions of potential inner-city workers and job openings in suburbs across the country. If the experiment works, the Clinton Administration



Susan M. Mumick

Michael A. Stegman, an assistant Housing and Urban Development secretary
Workers can help their inner-city communities by spending their suburban wages at home.

promises to seed 75 additional Bridges to Work programs. That's still small change.

Real access for inner-city residents to the metropolitan labor market will require the institutionalization of cross-county job placement and effective regional public transit. Those are perhaps the biggest obstacles of all.

County welfare administrators and those who run the Job Training Partnership Act (JTPA), the major federal employment program for the disadvantaged, "draw a mental map that confines the residents of [inner cities] to the bleakest part of the metropolitan labor market," Hughes, the father of Bridges to Work, said. "They're not even thinking about reaching out [across county boundaries]."

The need to put welfare recipients to work fast may force the states—now in the process of devising their own welfare-to-work programs—to look to metropolitan-wide job placements. JTPA still doesn't make it easy, however. That program is administered within geographically narrow service delivery areas. Case-workers in one service delivery area have no incentive to go outside the area for placements. Indeed, to do so invites a bureaucratic hassle. Congress has had a JTPA overhaul under consideration for several years but has failed to pass it.

On the transit side, as long as the reverse commute is dependent on a narrow federal grant program such as Bridges to Work, it isn't likely to become a major factor in the work life of most communities. To guarantee its spread and its future as a viable transit option, reverse commuting will have to become as universal and as institutionalized as the inbound commute.

That might happen on a small scale. Indeed, Pace has already taken over four

of the most efficient Suburban Job-Links routes. In Baltimore, Zelefsky said he would be monitoring Bridges to Work closely. "If they can demonstrate there's demand and it would be economically feasible, then we would definitely consider taking over that service," he said.

But the seeds of failure lurk in the blossoms of success. So far, those involved insist they haven't heard any suburban resistance to busloads of mostly minority, inner-city residents showing up in their communities. They also acknowledge, however, that few suburban residents are aware of the prospect of their arrival, and that when their presence is felt in suburbs, there could be a racial backlash from the communities.

If the program works and disadvantaged inner-city residents get good jobs in the suburbs, the first thing they are likely to do is buy cars. Indeed, Plunkett has a roster of hundreds of former Job-Links participants who now either own cars or carpool with others to good suburban jobs. Inbound public transportation is in demand because of road congestion and lack of downtown parking, two problems that commuters to the suburbs probably won't face any time soon.

As Pace and a few other creative transit agencies are doing already, however, Bridges to Work is expected to demonstrate that you can get there from here. That's vital to businesses around BWI, Shpritz recognized. "You can't have healthy growth in the [suburban] counties if Baltimore City fails," he said.

During the campaign, President Clinton kept citing the 10.5 million jobs created during his first term. "Without transportation," Hughes said, "they might as well be in Mexico as in the suburbs." ■

From Welfare to Work, Without a Car

By John O. Norquist

MILWAUKEE
During the Great Depression, Ira Gershwin wrote "Nice work, if you can get it." In today's sprawling metropolitan areas, you're more likely to hear "Nice work, if you can get to it."

The goal of the new Federal welfare law is to move millions of people from welfare to work. But while the poor are largely concentrated in central cities, employment opportunities are increasingly located in far-flung suburbs. Many people on welfare don't have reliable, affordable ways to reach those jobs.

Policy makers are slow to catch on. In southeast Wisconsin, for instance, state transportation officials are getting ready to spend up to \$2 billion to expand an interstate highway that already runs through the heart of Milwaukee. They would prefer not to include affordable rail

John O. Norquist, a Democrat, is Mayor of Milwaukee.

transit as part of the plan, leaving out central city residents who want to follow the migration of jobs to the suburbs but cannot afford cars.

The American Automobile Association puts the average cost of car ownership at \$6,500 per year. That's far beyond the reach of households at the poverty level. And without cars, or affordable public transportation,

The new law
makes it smart to
help mass transit.

many jobs will remain beyond their reach.

In a study of the San Francisco Bay area, for example, the Applied Research Center found that service-sector jobs were more likely to be in suburbs but housing costs, lack of mass transit and discrimination combined to make it "nearly impossible for urban residents of color" to get those jobs.

The Clinton Administration has proposed a "Bridges to Work" program to subsidize buses and vans taking city residents to suburban and exurban jobs. But this is a stopgap measure at best. Door-to-door long-distance shuttles simply are not cost effective.

Over the long term, we need to stop subsidizing suburban sprawl. Housing credits and the \$8.5 billion a year the nation spends for new roads alone help pull jobs and businesses away from urban neighborhoods.

Some forward-looking communities have taken a different approach.

In St. Louis, where the recently opened Metro-Link light rail line connects Lambert Field Airport with downtown and East St. Louis, an innovative program has brought together business, government and community groups that collaborate on creating jobs, providing housing and delivering social services along the rail corridor.

In Maryland's Montgomery County, officials changed zoning and housing codes to encourage construction of moderately priced new homes. They have begun to meet their goal of attracting police officers, teachers and other public employees who had



been priced out of the region's real estate market.

The nonprofit Surface Transportation Policy Project is working with communities across the nation to duplicate such programs. Congress can do its part by enhancing the 1991 Intermodal Surface Transportation Efficiency Act. That law was a good beginning, stimulating community involvement in transportation decisions and increasing overall financing for transit. Now, as Congress considers reauthorizing the legislation, it should allocate more money for mass transportation — with incentives for transit systems that offer urban residents access to jobs in the suburbs.

If we are to successfully assist people in moving off welfare and into work, we must make it easier for them to get to work. □

The "Shuttle Bug" Reverse Commute Project

Lake & Cook Counties, IL

Shuttle Service Promotes Transit and Helps Inner City Workers

Background: An innovative project on the outskirts of Chicago is providing shuttle service from a suburban commuter rail station to nearby companies, providing inner-city workers with access to suburban jobs. This program, known as the "Shuttle Bug," is part of a \$750,000 CMAQ funded project to provide improved multimodal access to a suburban business center in the Lake-Cook corridor. Located in Deerfield and Northbrook, approximately 25 miles northwest of downtown Chicago, the reverse commute project provides service between a Metra commuter rail station and local businesses. The service, which began in March, 1996, operates weekdays during rush hour and serves six routes in 15-passenger vans. Initial weekly ridership totaled 550 passengers, and ridership is growing. As of June, 1996, weekly ridership totaled over 840 passengers, and the Transportation Management Association (TMA) of Lake-Cook, which sponsored the project, is looking to expand service with larger vehicles. According to the Executive Director of the TMA of Lake-Cook, "This project is a win-win for all parties involved. The shuttle service will improve the labor accessibility of employers in the corridor, provide employees a convenient, reliable and hassle free way to commute to work and help reduce the traffic congestion on Lake-Cook Road."

The Shuttle Bug service is complemented by a separate CMAQ funded project in the Villages of Deerfield and Northbrook for the construction of improvements in the sidewalk system within 1/2 a mile of the Metra Station. This will improve pedestrian access in the vicinity of the commuter rail station.

Community Benefits: Shuttle Bug improves labor force accessibility for firms in the Lake-Cook area, particularly to the inner city labor force. With decentralization a continuing trend in the Chicago area, projects such as these provide needed access for low-income, inner city residents who, without such systems, are at a disadvantage in the labor force. The reverse commute project facilitates the hiring of inner city workers by suburban firms.

Transportation Benefits. By providing convenient shuttle service between the rail station and local businesses, individual employees will be encouraged to take mass transportation. As a result of this modal diversion, the project will help reduce congestion on roads in the Lake-Cook area and reduce auto emissions.

Economic Impacts: The project is public-private partnership between the TMA of Lake-Cook, the Villages of Northbrook and Deerfield and their respective Chambers of Commerce, and 14 businesses representing over 11,000 employees. Both the public and the private sector provided the local share funding for the project. Further, due to diversions from the private automobile, local governments may reduce the need to build new and wider roads, thus cutting back on the costs of infrastructure.

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TransitChek[®]

New York, NY

Innovative financing promotes transit in the Big Apple

About the Program: The TransitChek Program in the New York City area coordinates the distribution of employer-purchased transit fare subsidies. It began in 1987 when the TransitCenter created the nation's first subsidy voucher system for transit. Using one voucher, employees or employers could purchase fare media (i.e., passes, tickets, or tokens) from any transit agency in the area. Before the TransitCenter, companies had to purchase tickets or token from each transit agency in the region and distribute them to employees according to their commuting patterns. Under the system developed by TransitCenter, companies could purchase TransitChek vouchers up to \$15 per month per employee that were valid for all local transit systems. In return for purchasing the transit vouchers for employees, participating companies received a tax break and TransitCenter received a small fee. The TransitCenter's position as intermediary agent between the transit agencies and the employers made the program attractive to a large number of employers because it eliminated administrative burden.

Innovative Financing: Although the program was off the ground in the early 1990s, TransitCenter was still financially supported by its host agencies, the Port Authority of New York and New Jersey, the Metropolitan Transportation Authority, and New Jersey Transit. However, two events enabled TransitCenter to become financially self-sufficient. First was enactment of the National Energy Policy Act in 1992, which raised the cap on the subsidy to \$60 per employee per month. This provided larger tax savings to companies and a greater revenue stream for TransitCenter. The cap increase and better marketing helped raise 1993 sales of vouchers 200 percent from 1992 and, according to Larry Filler, Executive Director of TransitCenter, the number of fare subsidy programs across the country increased three fold.

TransitCenter then received \$1.7 million in ISTEA CMAQ funds to hire a sales force to market TransitChek and assist large companies in using the program. With the grant, TransitCenter hired eight sales representatives to expand marketing activities and expanded their service to the entire New York State nonattainment area. The result was that between 1993 and 1995, sales of vouchers increased by 78 percent, bringing annual sales to nearly \$42 million. As a result of these sales increases, TransitCenter will become financially self-sufficient in 1997 from the revenues generated by the TransitChek Program. More importantly, the TransitChek Program has increased transit ridership in the New York Metropolitan area. Last year alone, TransitChek was responsible for generating over 2 million additional rides.

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Ybor City Electric Streetcar

Tampa, FL

A New Streetcar Helps Revitalize an Older Community

Background: Ybor City, a district of Tampa, Florida, is constructing a historic streetcar line to enhance economic development and provide an alternative mode of transportation to the automobile. To facilitate the construction of the 2.3-mile line, Ybor City was awarded a Livable Communities Initiative demonstration grant by the Federal Transit Administration in April of 1996. The line will run through Ybor, a classic urban village which has shown strong signs of revitalization in recent years and was designated as an Enterprise Community by the Department of Housing and Urban Development. The electric streetcar, along with pedestrian enhancements, will assist in the revitalization efforts as well as provide a new and economical way of moving between various destinations. The streetcar will run between downtown Ybor and the Tampa Convention Center and will connect most of the residential, commercial, community, and public service activities in this ethnically diverse community. Destinations along the line include historic Ybor, cruise ship terminals, retail shops along Garrison Channel, the Ice Palace (hockey arena), the Sheraton Hotel, the Florida Aquarium, and the Tampa Convention Center.

Economic Impacts: The historic district of Ybor City and the waterfront area in Downtown Tampa is a significant residential area and an emerging art, entertainment, and convention district. The \$21 million project, funded from federal, state and local sources, will make the area more attractive as a tourist destination and will increase the national appeal of the Tampa Convention Center.

Transportation Benefits: The streetcar will provide improved connections between trip attractions in the Ybor City district and will alleviate traffic congestion parking pressure. The electric cars will make more frequent stops, and operate longer hours, with lower costs, than the existing bus system, and transit ridership is expected to increase. The clean electric cars will help Tampa maintain its recent Clean Air Act designation as an air quality maintenance area.

Community Benefits: The streetcar will improve transit service and increase access to jobs for community residents, particularly the low income and minority populations that live along the line. Because of the streetcar project and Ybor's designation as an Enterprise Community, economic activity and employment in the community is expected to increase. The project is unlike many others in that it was conceived by the community, rather than a governing body or independent agency. The project evolved in response to recommendations by the Tampa Enterprise Community Vision, which called for improved transportation by various modes and a renewal of the economic base of the area. The Community Vision was developed through a series of community meetings organized by residents, business leaders, service providers, and government officials. Local architects, engineers, historians, and community residents volunteered their time and services to develop the project plan.

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Chicago and the Tootsie Roll Factory: An Intermodal Success Story

by Don Chen and David Chandler

Chicago's economic heritage owes much to its role as a transportation hub. As historian William Cronon contends, during the latter half of the 19th century, "[Chicago] was where the West began." It served as the interface where frontier resources could be drawn in, then channeled to the nation's great Eastern cities. Even today, where trains and barges compete with trucks and planes, Chicago's importance to the American freight industry is astounding. According to the General Accounting Office, "...nearly half of all intermodal freight shipments [in the US] either originate, terminate, or connect in Chicago."

In recent years, however, what was once Chicago's great strength—its regional transportation system—is now one of the factors threatening the economic heart of the city.

Traffic congestion, deteriorating facilities, and the development of new infrastructure in exurban areas have diminished

To counteract these dispersing forces, community leaders have started implementing innovative measures

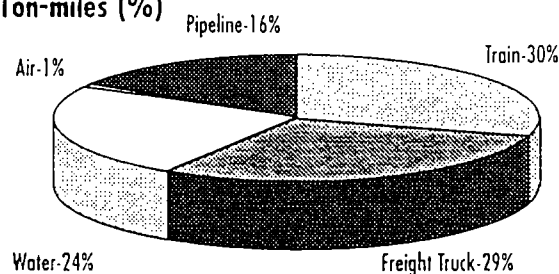
the city's intermodal transportation resources and the potential for economies of scale to create favorable conditions in industrial zones. With support from the city and a variety of sources, the project is a joint effort between Greater Southwest and local industries, and centers around an ideal region for industrial investment.

The industrial corridor is located on Chicago's Southwest Side, which is crisscrossed by freight rail lines that drove its early development and continue to provide direct service to industrial giants like Nabisco, Tootsie Roll, and Occidental Chemical. The area is also the site of intermodal freight depots for Sante Fe, Norfolk & Southern, and the Belt Line (which plays a major role in intra-region transfers) to name a few.

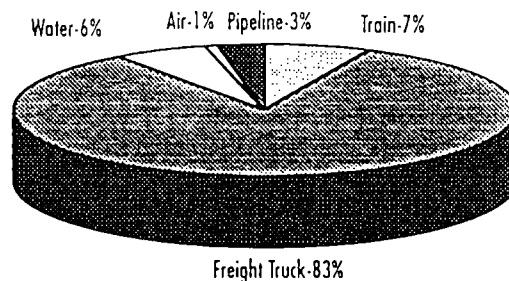
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The U. S. Freight Transport System, 1989

Ton-miles (%)



Energy Use (%)



Source: U.S. Congress, Office of Technology Assessment, Saving Energy in U.S. Transportation, OTA-ETI-539, July 1994, page 44.

the advantages of locating in the city. As a result, many large businesses, such as Sears, have been enticed to pull up stakes and head for the suburbs.

aimed at retaining businesses and revitalizing communities. One effort, spearheaded by the Greater Southwest Development Corporation, draws on

Chicago Freight

continued from page 3

Furthermore, the area is accessible by bus and rail transit.

Chicago's Southwest Side is one of a limited number of areas in America in which a range of industrial customers do business directly with freight rail lines, sending or receiving full freight cars as producers or users. In this area, there are also industrial companies that provide products or services for other nearby manufacturers, and there are companies whose waste provides feedstock for neighboring industries. In this setting, rail lines sometimes provide the only practical transport link from producer to consumer, bypassing the highway system entirely and optimizing environmental as well as economic efficiencies. As urban industrial areas such as Chicago's Southwest Side are rein- vigorated, this highly integrated type of transport development may become more common.

As part of its overall planning effort, Greater Southwest conducted a needs assessment survey of forty-one industrial companies in the area.

These companies ranked "a good arterial street system and availability of public transportation" as the single most attractive feature for industrial location in their area. Also, infrastructure development, particularly street and viaduct improvements, were among the most significant concerns of the responding companies. In several cases, respondents to the Southwest survey were the intermodal depot operators who voiced the same concerns noted in a recent FHWA study of Chicago intermodal rail facilities. Greater Southwest is supporting efforts to secure these improvements as part of an integrated development strategy, which recognizes the importance of maintaining state-of-the-art intermodal facilities so that local industries can continue to be served by efficient freight rail. As projects like the Southwest corridor are developed, it is becoming increasingly clear that their success will largely hinge on the availability of resources to improve highway infrastructure leading to

and from Chicago intermodal yards. Another critical element will be the level of coordination and economic development planning to take advantage of all the possible transfer and partnership opportunities.

It is largely because of the efforts of Greater Southwest that the Southwest Side is enjoying an economic renaissance. And the project is just part of Greater Southwest's pursuit of a community vision. It has in the past worked to preserve the social and economic fabric of the region by opposing the development of an expressway that would have destroyed a number of residential neighborhoods. It later focused community energy on advocating the development of the Orange Line, a major new passenger rail line that connects the Southwest Side to Chicago's Loop and the Midway Airport.

But the intermodal corridor development project is an effort to promote total community economic development, while taking advantage of Chicago's wealth of intermodal

resources and boosting the regional economy. It also underscores the fact that planning and partnerships are essential to reaping the energy efficiency and environmental benefits associated with intermodal freight movement. And increasingly, Chicagoans are recognizing that increasing the rail share of cargo movement between states and between intermodal yards could also yield significant economic rewards for the region. It may take a while before significant numbers of companies like Tootsie Roll, Kraft, and Nabisco decide to work in intermodal freight coalitions with their neighbors. But the support for intermodal freight from the city and groups like Greater Southwest signifies a deepening understanding that Chicago could stand to gain a lot by nurturing an environment in which transportation modes don't just compete against each other, but also complement one another. That's the part of Chicago's history that is really worth creating. ▼

PERFORMANCE MEASURES AND TRANSPORTATION

A NATIONAL GOAL FOR THE INTERSTATE SYSTEM

A specific national goal for the condition of the Interstate system should be established. Any state that allows more than one-half of its interstate mileage to fall below "fair" condition should be required to spend some of its federal highway funds to improve the condition of these highways. In addition, states that do particularly well in maintaining their interstate systems should be rewarded with grants from a bonus fund reserved from the overall federal highway program. These two concepts -- requiring those who fall below a minimum standard of acceptability to do better, and rewarding those who perform the best -- provide a solid framework for performance-based management of an important piece of the nation's transportation system.

Performance Measures

The traditional method of assuring that national transportation goals are pursued has been to direct money to specific activities. This method has proven its worth over the last 15 years in the Interstate Maintenance and Bridge programs; the condition of Interstates and bridges, which got steadily worse before these programs were established, has improved for most of the last decade. Targeting of funds to important activities is effective and appropriate, and the programs that do this -- the Bridge, Interstate Maintenance, Safety, Air Quality and Transportation Enhancements programs -- should be continued.

ISTEA included a less direct method of pursuing federal interests. Its system of enhanced planning directs the attention of state and local officials who control federal money to matters of national interest -- energy conservation, safety, etc., -- while allowing broad discretion in final spending decisions. This planning process is a good forum for balancing national, regional and local priorities, and should be also continued. Nevertheless, its open-ended nature allows states and localities to ignore national needs if they choose.

ISTEA II can inaugurate a new method of assuring attention to national goals while still allowing flexibility. This memo describes one example: a specific goal for the condition of the Interstate system, together with incentives for good performance and a required remedy for poor performance.

The Interstate System

The United States has 44,000 miles of Interstate highways. They were built by the states and are owned by the states, but were paid for almost entirely with federal money, generally on a 90 percent federal/10 percent state basis. Since 1956, the federal government has spent the equivalent of nearly \$300 million of today's dollars to build this system.

In spite of recent improvements in the condition of the Interstates, many parts of the system are in bad shape. However, the problem is not ubiquitous -- there are great disparities between the states. The portion of the system in worse than "fair" condition in 1994 ranged from under 2 percent (Maine, Alabama, Georgia and New Hampshire) to over 70 percent (Texas, Arkansas, Wyoming, Minnesota and the District of Columbia.)¹ See attachment 1 for complete rankings.

This variability has many causes. The funds targeted by ISTEA for interstate maintenance are not enough to bring these roads up to an acceptable standard in every state, although they are sufficient in many states. More funding could be put into the Interstate Maintenance program, but this is not an efficient way of solving the problem. The formula that divides these funds among the states is based on the extent and usage of the system, but does not consider its current condition. Putting more money into the program will send significant resources to states where problems are minor, and not enough where needs are greatest.

Two things need to occur. First, funds should be directed to states where conditions are poorest, and second, a system of incentives should be established to encourage continuing improvement in all states.

The Proposal

A national performance indicator for the condition of the interstate system should be established, consisting of the percent of interstate miles within each state in less than fair condition. Ratings would be updated annually on the basis of the ongoing measurements of pavement condition made by state DOTs and tracked by FHWA. Each year, the 5 states with the best condition rating would receive \$30 million each in flexible funds as a reward. These funds could be spent on any transportation program. In addition, beginning in the third year of the new program, the 5 states registering the greatest improvement over the preceding 3 years would also receive \$30 million each. At the other end of the scale, states with more than half of their interstate miles in worse than "fair" condition would have 25 percent of their National Highway System funds restricted to interstate maintenance projects activities until they reach the national goal. In 1994, the latest year for which we have data, 10 states and the District of Columbia fell into this category.

This program would be based entirely on performance. States that perform well would be rewarded for their efforts. Those that perform poorly would be asked to do better, with federal funds covering the cost. This proposal can be part of a new system of policy making that measures performance and controls funds accordingly.

- Attachments:
1. Interstate pavement conditions by state
 2. The PSR scale for rating pavement condition

¹ The Federal Highway Administration describes pavement condition according to a "pavement serviceability rating" on the following scale: Very Good, Good, Fair, Mediocre and Poor. See attachment 2 for further information.

Questions & Answers About the “Fix It First” Program

Why Reward Overall Condition and Improvement? If only overall condition is rewarded, states below the top tier will feel little incentive to invest in improving conditions. On the other hand, rewarding only improvement gives all states an incentive to make progress, but those that have done a good job in the past will be no better off than those that have done a poor job. By rewarding both overall condition and improvement, both current and past responsible behavior are recognized.

Why the Interstates? Why not the National Highway System? A national goal for the condition of the Interstate system is preferable to one for the NHS for several reasons. First, the direct federal interest in the Interstates system is greater than in the NHS. Some NHS roads were built with state funds, and it would be difficult for the federal government to hold states accountable for their condition. The Interstate system was built with 90 percent federal money, and the national interest in its condition is undisputed.

Second, the condition of the NHS is not actually measured. It is derived through sampling -- the condition of certain routes is measured, and these results are extrapolated to the overall system. It would be problematic to give out money on the basis of estimates, and having the states measure the condition of the entire 160,000-mile system would be costly. By contrast, the condition of the entire interstate system is already measured according to a well established protocol.

Finally, a federal commitment to maintain the entire NHS is not affordable. Even at its original proposed size of 150,000 miles, it was doubtful whether money was available to do this. In 1991, USDOT proposed to achieve this goal by setting the state share for NHS projects at 25 percent instead of the current 20 percent, and by requiring most federal dollars to be spent on the NHS. Both ideas were rejected in 1991 and are unlikely to be embraced in 1997. Even if they were, expansion of the NHS to over 160,000 miles has made a commitment to its condition even more unrealistic. By contrast, bringing the Interstate system up to acceptable condition is achievable within current resources without significantly hampering the pursuit of other goals. The remedy we propose for poorly performing states -- restriction of one-fourth of NHS funds to interstate maintenance projects -- is a mild intervention given the importance of the problem.

Why rank states by “less than fair” condition? Several measures of the condition of a state’s interstate highways are possible, including a composite figure for the average condition of a state’s mileage, or the portion of the system in top shape. The “less than fair” measure is best because of the concept it expresses, i.e., acceptable condition vs. unacceptable condition. It’s not necessary for the federal government to intervene as long as most of a state’s routes meet a minimum standard of acceptability, i.e., Fair condition or better. But if more than half of a state’s mileage falls below Fair condition, the federal government has a responsibility to act.

Rankings of States
(in descending order)

State	% Interstates In Poor and Med. Condition	State	% NHS In Poor Condition ¹
Dist. of Col.	91.67%	Dist. of Col.	56.36%
Minnesota	78.45%	Rhode Island	27.31%
Wyoming	76.91%	Minnesota	21.14%
Arkansas	75.33%	New York	16.36%
Texas	71.37%	Delaware	14.61%
South Dakota	62.83%	Maryland	13.45%
Delaware	58.54%	Alaska	13.33%
North Carolina	55.87%	Missouri	11.07%
Nebraska	55.60%	Michigan	10.20%
Alaska	55.16%	Illinois	10.00%
West Virginia	51.73%	Oklahoma	9.53%
Washington	49.54%	North Carolina	9.24%
Conn.	49.27%	Louisiana	8.36%
Florida	45.24%	Indiana	8.30%
Illinois	42.96%	New Mexico	8.13%
Colorado	42.14%	Penn.	7.00%
Kentucky	40.55%	Texas	6.89%
Penn.	39.97%	Nebraska	6.19%
Montana	39.31%	Wyoming	5.22%
Rhode Island	38.57%	Conn.	5.08%
North Dakota	37.83%	Virginia	5.02%
Idaho	37.64%	Colorado	5.01%
New Mexico	36.50%	Arkansas	4.97%
Mississippi	35.77%	Mississippi	4.58%
California	35.47%	Mass.	4.57%
Hawaii	31.03%	California	4.14%
Michigan	30.13%	Montana	3.95%
New York	29.23%	Wisconsin	3.75%
Virginia	27.94%	Vermont	3.58%
Iowa	27.81%	North Dakota	3.55%
Kansas	27.41%	Kansas	3.17%
Maryland	27.39%	Kentucky	3.03%
Wisconsin	26.80%	South Dakota	2.94%
Louisiana	26.45%	Idaho	2.78%
Indiana	26.24%	Oregon	2.61%
Missouri	24.04%	Tennessee	2.18%
New Jersey	20.53%	Florida	2.13%
Tennessee	19.96%	Washington	2.01%
Oregon	19.53%	New Hamp.	1.80%
Oklahoma	19.48%	West Virginia	1.69%
Mass.	15.40%	Maine	1.65%
South Carolina	12.24%	Ohio	1.61%
Nevada	8.61%	South Carolina	1.13%
Arizona	7.10%	Alabama	0.98%
Ohio	5.34%	Arizona	0.76%
Utah	4.15%	Hawaii	0.74%
Vermont	2.81%	New Jersey	0.73%
Maine	1.62%	Iowa	0.65%
Alabama	1.33%	Nevada	0.20%
Georgia	0.40%	Georgia	0.07%
New Hamp.	0.00%	Utah	0.04%

Exhibit 4-17

Pavement Condition and Roughness Definitions*

Very Good New or almost new pavement, will not require improvement for some time.

PSR*	Interstate	≥ 4.0
	Other	≥ 4.0

IRI**	Interstate	< 60
	Other	< 60

Good In decent condition; will not require improvement in the near future.

PSR	Interstate	3.5 - 3.9
	Other	3.5 - 3.9

IRI	Interstate	60 - 94
	Other	60 - 94

Fair Will likely need improvement in the near future, but depends on traffic use.

PSR	Interstate	3.1 - 3.4
	Other	2.6 - 3.4

IRI	Interstate	95 - 119
	Other	95 - 170

Mediocre Needs improvement in the near future to preserve usability.

PSR	Interstate	2.6 - 3.0
	Other	2.1 - 2.5

IRI	Interstate	120 - 170
	Other	171 - 220

Poor Needs immediate improvement to restore serviceability.

PSR	Interstate	≤ 2.5
	Other	≤ 2.0

IRI	Interstate	> 170
	Other	> 220

Note: In many of the exhibits in this report the categories "Good" and "Very Good" are combined under the term "Good," as the pavement in both categories will not require improvement in the near future.

* PSR = Present Serviceability Rating

** IRI = International Roughness Index

A NATIONAL INITIATIVE ON TRANSPORTATION AND THE ENVIRONMENT

ISTEA Reauthorization is an opportunity to make a new commitment to addressing the unintended consequences of transportation spending. In place of the old focus on building facilities, the federal role should shift toward addressing the impacts of transportation on society not captured by user charges. In addition to air pollution, wetlands loss, climate change and other environmental effects, these include dependence on fossil fuels, land use impacts, and undoing the damage to communities caused by past transportation investments. Just for air pollution, estimated costs for health care, lost productivity and other effects range from \$30 billion to over \$200 billion per year, almost none of which is paid by transportation users.

These problems should be the focus of a new, comprehensive federal approach to understanding and lessening the impacts of transportation on the environment. Such a program could include several basic elements:

1. Assuring reauthorization of those parts of ISTEA with environmentally beneficial effects: the CMAQ and transportation enhancements programs, funding for transit and rail, and its planning and transportation conformity provisions.
2. A federal commitment to having every new transit bus purchased in the U.S. in the next five years powered by clean fuels. This could be done by providing the funding necessary to cover the incremental costs of alternative fuel vehicles over conventional ones.
3. A new effort to protect wetlands from the impacts of development driven by transportation facilities, and, if the science proves valid, funding for restoration of deteriorated wetlands to partially compensate for ongoing losses.
4. Establishment of performance measures for energy efficiency in transportation that can be used to track the performance of states and metropolitan areas over time and reward states and metropolitan areas that are doing well.
5. An expansion of the Congestion Pricing Pilot Program created by ISTEA to promote full-cost pricing of transportation facilities.

These activities fall along a broad range but share a common theme. All are meant to promote a value we claim to hold dear -- protecting the environment -- which will not be properly addressed in a system that continues to focus building facilities rather than providing efficient transportation without undue external effects.

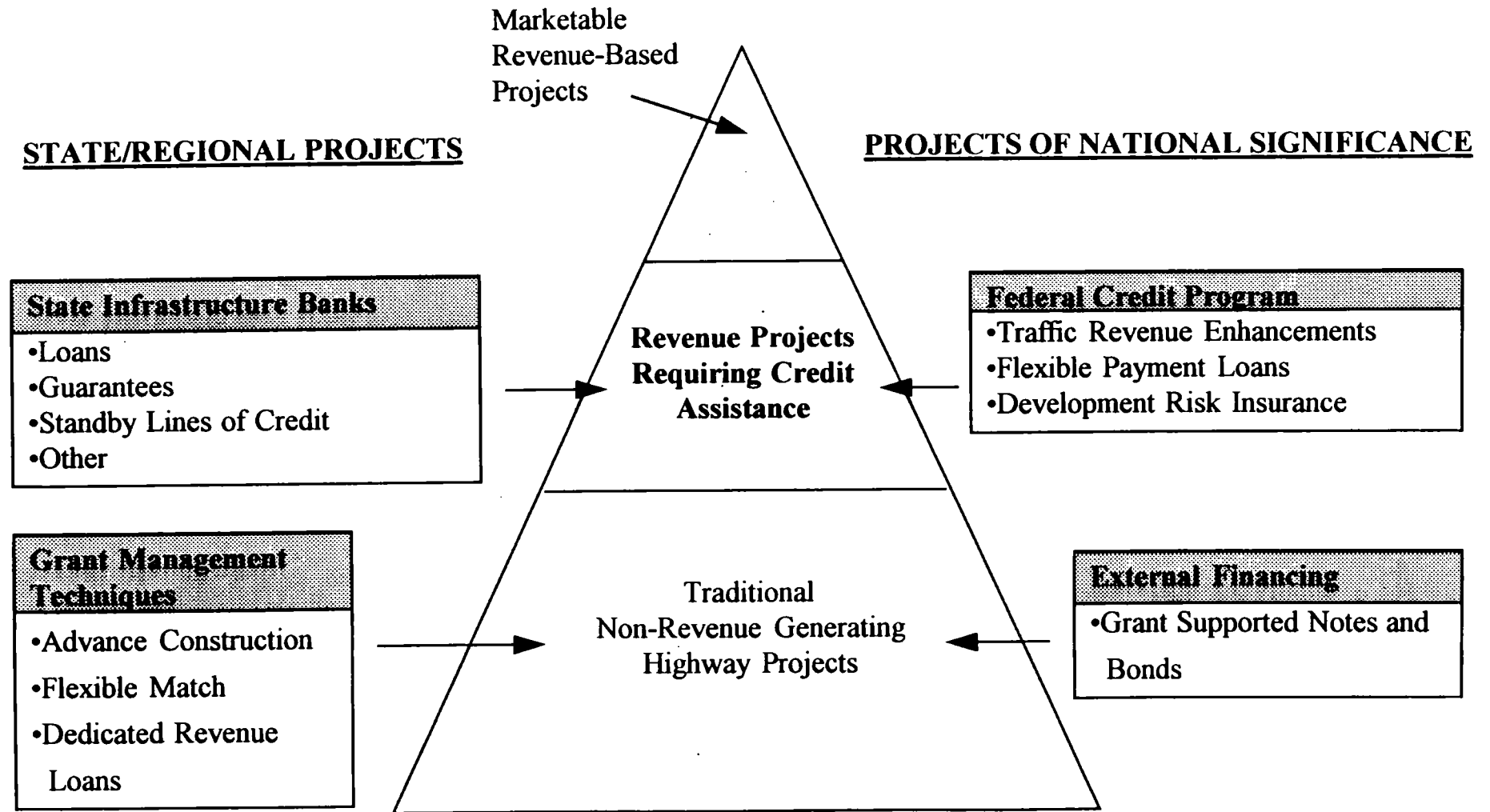
Reauthorization Proposal:

***Outlining a Federal Credit Program
for Surface Transportation***

November 26, 1996

U.S. Department of Transportation

Transportation Infrastructure Financing Mechanisms



I. Credit Program Performance Goals

A. OUTCOME GOALS

Increase Capital Investment in Nation's Transport Infrastructure to promote Economic Growth

Promote a Unified and Interconnected National Transportation System by supporting critical **Intermodal** and other **National Investments**

Improve Resource Allocation by **Correcting Market Deficiencies**

B. REAUTHORIZATION GOALS

Emphasize **State/Local Flexibility** in Allocating Resources and managing Transportation Programs

Foster **Public/Private Partnerships** to facilitate Planning, Financing, Building, and Operating of Facilities

Continue successful **Incremental Approach** for new programs by providing Federal Credit under limited terms as another financing "tool" for State Infrastructure Banks

Restructure existing ad hoc efforts (annual Discretionary Appropriations for TCA Toll Roads, Alameda Corridor) into a **Uniform Credit Assistance Program** for Projects of National Significance which will be equitable and efficient.

C. FISCAL OBJECTIVES

Address Investment Needs in **More Cost-Effective** way than traditional Grants for certain class of Projects (potentially self-sustaining)

Minimize Budgetary Impact by tying Subsidy Costs of Credit to specific Authorizations and to each State's Unobligated Balance

Limit Federal Financial Exposure by capping face value of Credit both in Aggregate and for each State

Leverage substantial Private Co-Investment and Promote efficient Project Selection by limiting Federal participation and establishing other parameters that enforce Market Discipline

D. PROGRAMMATIC OBJECTIVES

1. Attract Private Capital to expand Infrastructure Capital Formation

- Provide source of Secondary and Subordinate Capital for project financings with Independent Revenue Streams
- Act as Co-Investor with Private Investors per Executive Order 12893
- Share Development and Start-up Risks
- Reduce Transactional "Friction" (Capital Costs, Reserve Requirements and Coverage Levels)

2. Fill Market Gaps to complement and encourage Private Capital Investment

- Identify Market "Gaps" and define appropriate Federal Niches involving Flexibility, Investment Horizon, Liquidity, Risk, Uncertainty
- Promote Limited Menu approach

3. Charge Users/Beneficiaries to promote Social Equity and Economic Efficiency

- Provide Credit to Projects Supportable from Independent Revenue Streams
- Draw upon willingness of Users to pay where feasible
- Allow Users to Receive Benefits and Services sooner

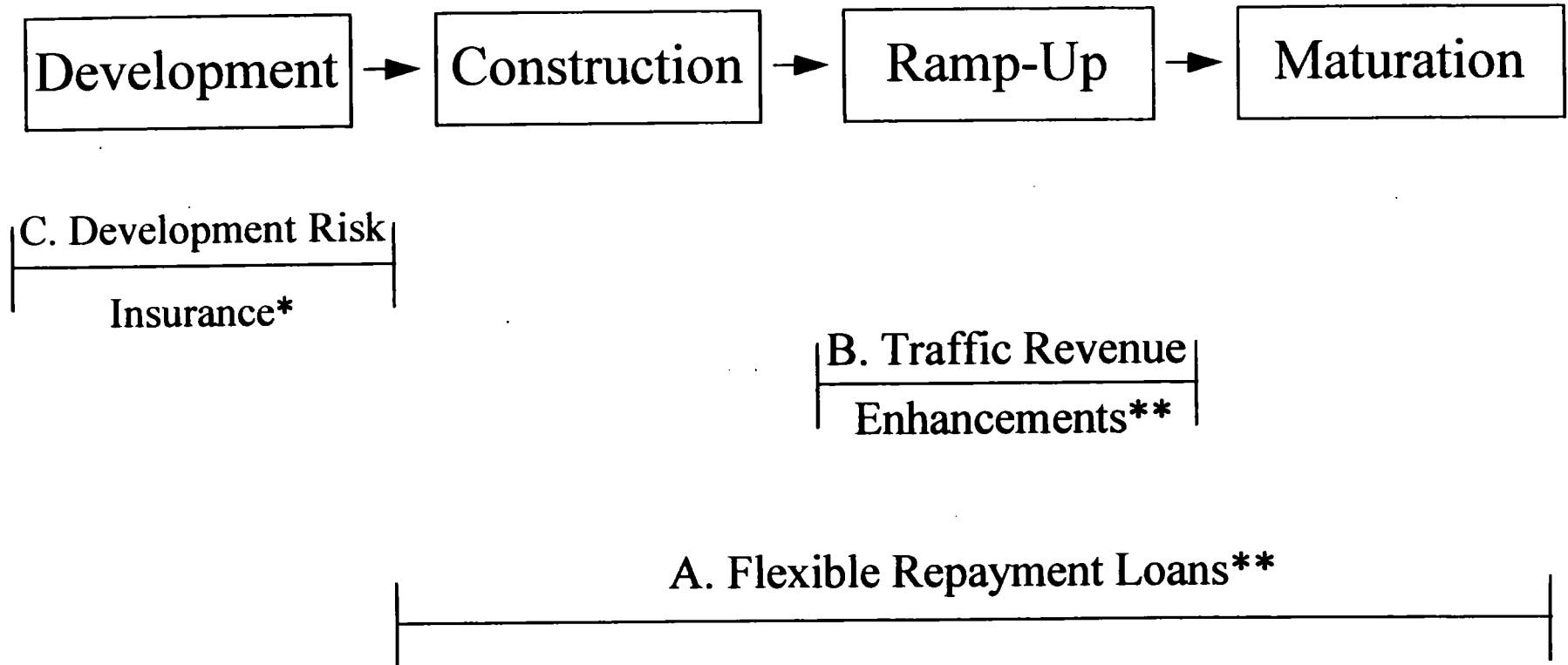
4. Target Projects of National Significance that lend themselves to Credit Assistance

- Support complex, large-scale Projects (too big for States' regular programs)
- Direct resources to areas of critical National Importance (Bi-State Bridges, Trade Corridors, Border Facilities, Intermodal Connections) that otherwise might be delayed or not constructed
- Establish threshold Criteria for Eligibility based on Size and Economic Impact

5. Utilize State Infrastructure Banks (SIBs) to ensure local involvement and "buy-in"

- Employ SIBs as Loan Originators/Servicers
- Provide Federal Credit to SIB in the form of a "Separate Account Loan" linked to a Specific Project to insulate it from SIB's other Credit Risk
- Use Federal Credit as a technique for SIBs to further develop their own Financial Capacity and Lending Expertise

Potential Forms of Federal Credit Assistance in the Project Life Cycle



* Development Risk Insurance will account for 10% of Subsidy Budget Authority

**Flexible Repayment Loans and Traffic Revenue Enhancements together will account for 90% of Subsidy Budget Authority

II. Federal Credit Product Lines

A. FLEXIBLE PAYMENT LOANS

Market Gap: Meeting Capitalization Requirements for National Investments

- Private capital is discouraged by size, complexity, long-term horizon, and uncertain revenue streams of "one-of-a-kind" transportation infrastructure projects
- Project revenues are often weak during early years but grow over time; however, capital markets prefer level debt service structure and demand yield premiums for uneven/irregular payment flows
- Large amounts of bond proceeds must be set aside or project revenues/tolls must be increased to satisfy debt service Reserve Accounts and Coverage Requirements
- Senior debt is more marketable if portion of costs is funded by junior debt, but market for junior debt is extremely limited
- Investors prefer co-investment by government to evidence public support for project
- States/locals often lack sufficient resources or face legal barriers to internally fund long-term debt

Federal Role: Flexible Repayment Loans -- offer long-term permanent financing with Flexible Payment Features to alleviate market concerns and promote efficient use of private capital

- Fill market need for "patient" investor with long-term horizon and no liquidity requirements
- Structure *flexible repayment schedules* with deferrable interest and principal to match realized project revenues
- Improve caliber of senior debt by participating in annual project revenues on *junior lien basis* after senior debt obligations are met (i.e., from "coverage" cash flow)
- Facilitate Project's access to private capital by enhancing senior debt coverage, lowering interest rates, reducing reserve requirements
- Leverage substantial private financing of market-viable investments by limiting Federal credit to 33% of total project costs
- Charge taxable (Treasury) rates on loans to provide incentive for project sponsors to refinance and take out Federal debt
- Secure loans with rate covenants, defined claims on project revenues, limits on issuance of additional debt

B. STANDBY REVENUE ENHANCEMENTS

Market Gap: Overcoming Start-up Revenue Uncertainty

- Toll project financing impeded by investors' inexperience with and skepticism about traffic revenue forecasting, especially during "start-up" period
- Principal revenue source (tolls) uncertain, given established network of competing free highways
- Information on price elasticity of traffic demand is incomplete; uncertainty leads to perceived risk, higher yield premiums, higher tolls, less traffic, more uncertainty...
- Secondary sources of contingent capital beyond reserve funds not readily available

Federal Role: (1) Traffic-Risk Lines of Credit -- alleviate start-up risk/uncertainty by providing Standby Lines of Credit to cover revenue shortfalls during first 10 years of operation

- Enable States/locals/project sponsors to advance toll projects by offering standby lines of credit (LOC) *contingent upon project completion*
- Credit would be available for limited period of time after project completion and could be used for any purpose revenues would have been used for (broadly defined as with TCA)
- Structure LOC with defined terms and maximum amounts--limit total amount of credit to 33% of project costs (construction cost plus capitalized interest), limit annual draws to 50% of projected debt service, limit availability to 10 years
- Flexible repayment (long-term with deferred interest and principal) of any LOC advances on junior lien basis at Treasury rate
- Such credit assistance would enhance debt and could improve ratings
- Fill gap currently not presently covered by private sector (bond insurers, commercial banks); may be transitional Federal niche depending on market maturation

Federal Role: (2) Traffic-Risk Reinsurance -- alleviate start-up risk/uncertainty by providing Standby Reinsurance to cover revenue shortfalls during first 10 years of operation

- Attract participation of Private Bond Insurers by offering Bond Reinsurance (First Loss Insurance) on Start-up Projects
- Credit would be available for limited period of time after project completion to cover revenue shortfalls for debt service
- Structure Reinsurance with defined terms and maximum amounts--limit total amount of credit to 33% of project costs (construction cost plus capitalized interest), limit annual draws to 50% of projected debt service, limit availability to 10 years
- Flexible repayment (long-term with deferred interest and principal) of any Reinsurance advances on junior lien basis at Treasury rate
- Inducement of Bond Insurance will dramatically lower cost of capital; may be transitional Federal niche depending on market maturation
- This option especially may have transit / AMTRAK applications--insuring equipment financing through COPs, lease/purchase

C. DEVELOPMENT RISK INSURANCE

Market Gap: Reducing Risk during Developmental Phase of Projects

- Pre-Construction phase has many uncertainties--Environmental Permitting, Litigation, Local Political Support, Preliminary Engineering, Revenue Feasibility
- Development Phase Costs can exceed \$5 million per Project and take years to recoup
- Venture Capital is problematic; essentially limited to "Strategic" Investors (Constructors, Engineering Firms, Operators) increasingly unwilling or unable to front costs alone due to past problems

Federal Role: Development Risk Insurance -- Insure a portion of Pre-Construction Costs incurred by Selected Project Sponsor to speed project development and attract private financing

- Enforce Market Discipline by requiring Project Sponsor to fund all costs and retain at least 40% Exposure
- Require State to share risk--Federal insurance could cover 40% of Pre-Construction Costs and State could match another 20%
- Charge Insurance Premiums to lower Subsidy Costs
- Could structure as categorical grant program if risk subsidy indeterminant (scored at 100%)
- Expand market activity by increasing number of investments advanced to Construction Stage
- Limit cost and volume of insurance based on size of State's program/Unobligated Balance and per-project maximum
- Restrict to Projects of National Significance--must cost \$100 million or half the amount of State's annual apportionment and must meet other criteria as determined by Secretary
- Allow State to determine if/when to pay, when project fails for eligible reasons other than developer malfeasance--Fed pays when State pays (if no construction within 5 years?)
- Reimbursement will also include share of costs incurred before selection

III. Project Selection, Risk Evaluation, and Credit Servicing

A. PROJECT SELECTION

Size Threshold--Project must cost \$100 million or 50% of State's annual apportionment to qualify for Federal credit

National Significance--Projects meeting size threshold then will be evaluated by USDOT for "National Significance" (economic impact) according to criteria developed by Secretary

Private Co-investment--Project receiving Federal credit must have at least 50% *non-Federal* co-investment that includes significant Private Investment (as determined by Secretary)

Assistance Cap--Federal Credit shall not exceed 33% of project costs (defined by Secretary--construction plus capitalized interest?), and total Federal assistance (including grants) shall not exceed 50% of project costs

State/Local Priority--Project must be on STIP to ensure State/local needs are met

State/Local Submission--Project application may be forwarded by State or other entity (inclusion in STIP is State endorsement)

B. RISK EVALUATION

Background--existing Credit Assessment Methods used by OMB for business and individual loans are not appropriate for Surface Transportation project financings

- Transport capital investments tend to be large, heterogeneous, complex
- OMB historical data inputs used for evaluating relatively uniform portfolios (e.g., student, housing, agricultural, small business loans) are not applicable
- "Risk-Adjusted Yield" technique used for scoring Alameda Corridor (i.e., discounting the Federal loan by the market yield associated with the shadow rating on the project) grossly overstates default risk; market yields are not accurate indicators of actuarial default risk, as demonstrated by enormous success of municipal bond insurance industry

Approach--Transport Scoring Model should be *Market-Based* and calculated by *Independent* third party experts, using *Transparent and Objective Criteria*

- USDOT would *out-source* credit analysis of each Project to Bond Rating Agencies
- USDOT would draw upon methodology used by Rating Agencies to assess strength of bond insurers ("capital reserve" ratios)
- The capital reserve approach is what enables major municipal bond insurers like AMBAC, FGIC and MBIA to obtain Aaa/AAA ratings on their claims-paying ability, for

portfolios consisting of lesser-rated paper

Process--For each Project Loan, the Federal Credit Program would use a three-step analysis:

Step 1. The Project Applicant obtains an opinion letter from one of the Big Three rating agencies (Moody's, Standard & Poors', or Fitch's) giving a preliminary indication of the Project's likely senior debt rating category (e.g. A, BBB, etc.).

Step 2. Based on the rating received, a Capital Reserve Charge is assigned to the Federal Loan which, notwithstanding its junior-lien status, will have the same long-term risk profile as the Project's senior debt due to the flexible payment structure. This capital reserve charge would be expressed as a series of annual anticipated cash flows relating to a particular loan.

Step 3. The cash flows are placed in the OMB Scoring Model and discounted at the relevant Treasury rate to derive a present value subsidy cost.

C. CREDIT SERVICING

State-Level Entity generally will receive credit and service customers/sponsors--operating through State will facilitate planning and coordination

- *Flexible Payment Loans* and *Traffic-Risk Lines of Credit* will be provided through State Infrastructure Bank (SIB)--State without SIB must create SIB or designate other financing entity
- *Traffic-Risk Reinsurance* will be provided through Bond Insurer
- *Development Risk Insurance* will be provided through SIB (or State DOT if no SIB)

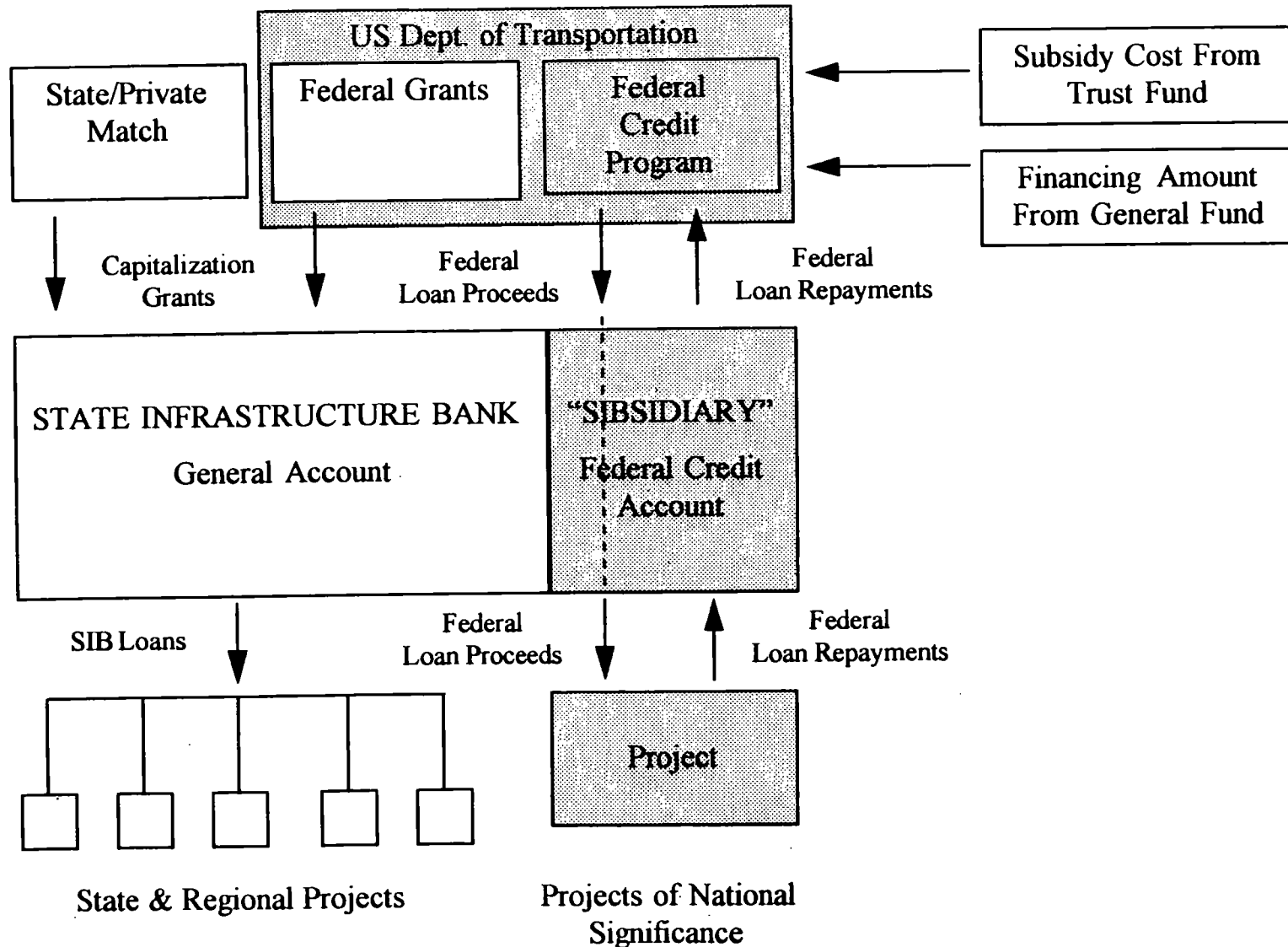
Federal Credit for Specific Projects--subsidy costs still based on project-level assessments

Operate Through SIB to:

- Increase scope, expertise, investor confidence in SIB
- Allow SIB to charge administrative servicing fees on Federal credit customers, thereby increasing capitalization
- Enable SIB to overcome start-up capacity limitations (due to initial small size, lack of portfolio, no credit history) and provide substantial assistance to large projects

Create Separate SIB Account (the "SIBsidiary") to protect Federal credit from default risk of other SIB activities; no co-mingling/cross collateralization with other SIB resources

“PASSTHROUGH” ROLE OF STATE INFRASTRUCTURE BANK IN FEDERAL CREDIT PROGRAM



IV. Credit Program Funding Mechanism

Mandatory Program -- Utilizing Existing Contract Authority (Unobligated Balances)

Seek multi-year authorization (use of existing ISTEA contract authority) sufficient to fund Subsidy Costs of large-scale Nationally Significant Projects--average of \$250 million per year (perhaps starting at \$150 million in year 1 and ramping up to \$350 million by year 5 to total \$1.25 billion over 5-year reauth period)

New Mandatory Spending (subject to PAYGO budget rules) funded from HTF and exempt from annual Obligation Limitations

Cap aggregate credit volume--about \$3 billion per year (\$15 billion over 5-year reauth period)

States/locals/sponsors submit choices of Nationally Significant Investments to receive credit assistance to USDOT for evaluation

USDOT (at Secretary's discretion based on certain criteria) determines which applicants get funded out of authorized credit spending--subsidy cost for each project charged to that State's Unobligated Balance of apportioned Contract Authority

Pros:

- Viewed favorably by States as *additional spending that otherwise would not occur*:
 - Allows access to unobligated balances voluntarily; first step in opening that door to additional spending
 - States might support if they have written off any hope of gaining access to balances in future
 - Additional spending not likely for just more grants
 - States that benefit most directly from Federal credit pay for it with apportioned fund balances
- Allows USDOT to have say in allocating resources
- Although it involves additional outlays, it does not require new budget authority
- Mandatory spending does not compete for capped discretionary outlays, does compete with "classic" demos
- Potential earmarking would occur up-front upon authorization rather than annually
- Contract authority provides secure funding known in advance--avoids uncertainty of annual appropriations

Cons:

- Viewed unfavorably by States as *funding capacity that otherwise could be used to provide larger grant program* (\$150 million in first-year credit outlays could otherwise allow additional highway obligation authority of \$1.0 billion assuming 15% first-year outlay rate):
 - Disincentive if States have to use own apportionments for "National" investments
 - If States harbor hope of going "off budget," they won't want to use balances prematurely
- Requires USDOT to establish criteria and manage "discretionary" program--pick winners
- Would crowd out spending on other mandatory programs (MA, ER, demos)
- Appropriators have no say--control of Authorizers

Federal Surface Transportation Credit Program Estimated Budgetary Costs and Credit Amounts

(dollar amounts in millions)

	A	B	C = A * B	D	E = C * D	F	G = E * F	H = C * F	I = (A * F) - H	J = H + I
Proposed Product	Cost of Typical Project	Federal Participation Ratio	Amount of Credit per Project	Average Subsidy Rate per Project	Average Subsidy Cost per project	Number of Projects per Year	Budget Authority (Subsidy Cost) per Year	Face Value of Credit per Year	Non-Federal Investment per Year	Total Capital Investment per Year
Flexible Payment Loans	\$500.0	33.0%	\$165.0	12.5% /2	\$20.6	5	\$103.1	\$825.0	\$1,675.0	\$2,500.0
Traffic Revenue Enhancements	\$500.0	33.0%	\$165.0					\$1,650.0	\$3,350.0	\$5,000.0
NPV of 10-year LOC available after construction: *			\$97.0	12.5% /2	\$12.1	10	\$121.2		\$5,000.0 /4	
Development Risk Insurance	\$5.0 /1	40.0%	\$2.0	50.0% /3	\$1.0	25	\$25.0	\$50.0	\$75.0	\$125.0
Annual Totals						40	\$249.3	\$2,525.0	\$5,100.0	\$7,625.0
5-Year Reauthorization Totals						200	\$1,246.7	\$12,625.0	\$25,500.0	\$38,125.0

Leverage Factors:

Ratio of total Project cost to Face Value of Federal Credit
Ratio of total Project cost to Subsidy Cost of Federal Credit

3.0 :1
30.6 :1

/1 Pre-construction development costs relate to environmental permitting, preliminary engineering, feasibility studies, etc. incurred once a State has selected a preferred consortium to proceed with detailed plans. We assume in this presentation that the Federal government guarantees 40% of the pre-construction costs, the State guarantees another 20%, and the private consortium bears the remaining 40%. The actual construction costs likely would range from \$100 - \$500 million per project.

/2 This represents the likely budget scoring charge—as estimated by Fitch Investors Service—on projects receiving junior lien Federal credit that have senior debt rated “BB” to “BBB” (50/50 weighted average). Projects that have senior debt rated exclusively “BBB” would have a scoring cost of only 5%.

/3 For risk-scoring purposes, we assume that half of all projects in the pre-construction phase fail to proceed to construction.

/4 Since Traffic Revenue Enhancements are standby credit products, the non-Federal investment per project actually equals the total cost of the project.

* Since Traffic Revenue Enhancements are standby credit products available only for a fixed period of time (10-year window) after project construction is complete, the subsidy costs are based on the net present value of those potential draws rather than the nominal face value. The subsidy calculation for this proposed product includes the following assumptions: a \$500 million loan or debt issuance with 30-year term, 6% tax-free interest rate, and \$36 million per year level debt service; a \$165 million standby Federal Traffic Revenue Enhancement available from years 4-13 after a 3-year construction period with annual draws not to exceed 50% of projected debt service, or \$18 million per year; maximum draws occur beginning in year 4 and lasting through year 13 until the \$165 million credit line is exhausted. The scoring charge assumes that the \$165 million draw is repaid at the taxable Treasury rate (7%) by the end of the 30-year term.

V. How the Federal Credit Program Complements Recent USDOT Initiatives (SIBs)

Limitations on SIBs

By definition, the Federal Credit Program is designed to assist "Mega-Projects" (generally greater than \$100 million and of National Significance).

State Infrastructure Banks (SIBs), like other start-up credit intermediaries, are best suited to assist portfolios of smaller, homogenous credits.

Federal Capitalization Grants for SIBs are severely constrained by the budgetary limitation on outlays, reducing SIBs' capacity to fund large loans directly in the near term.

SIBs will require a number of years to build up sufficient Financial Resources to access external funding beyond their own Contributed Capital.

The other, new provisions of the NHS Act have expanded flexibility within ISTEA at the margin, but do not squarely address the Market Gaps associated with financing User-Charge Start-Up Facilities.

The Role of SIBs in the Federal Credit Program

The Federal Credit Program has been designed to enable SIBs to participate in a meaningful way in financing Large Projects of National Significance:

- SIBs will serve as Credit Originators/Servicers, ensuring State/Local "buy-in" and obviating much of the need for direct Federal supervision.
- SIBs will be able to develop their own financial expertise by direct participation in financing the projects receiving Federal Credit.
- SIBs will be allowed to collect an annual Servicing Fee, which could represent a significant source of cash flow to the SIB, given the scale of the Projects under the Federal Credit Program.
- Federal Budgetary Scoring and Financing Authority from the U.S. Treasury enable Federal Credit to leverage a given "subsidy cost" at a substantial multiple, whereas the same amount given as a grant to a SIB has only a 1:1 impact.

As a policy matter, SIBs should be capitalized through Grants rather than Loans (Credit). If the SIB incurred long-term liabilities under the Federal Credit Program, its ability to provide financing on favorable terms to Projects would be inhibited, and its potential for future growth would be diminished. Over time and with prudent fiscal management, SIBs eventually should be able to arrange their own external financing (i.e., incur debt).

INDICATIVE PROJECT CANDIDATES FOR FEDERAL CREDIT

(dollars in millions)

FLEXIBLE PAYMENT LOANS

PROJECT DESCRIPTION	LOCATION	TOTAL COST*
<i>Alameda Corridor</i> (20 mile Rail/Highway Freightway)	Los Angeles/Long Beach, CA	\$1,860
<i>Miami Intermodal Center</i> (Airport, Parking, Highway, Transit, Commuter Rail, High Speed Rail Concession Development)	Miami, FL	\$1,700
<i>Woodrow Wilson Bridge</i> (10 Lane Toll Bridge across Potomac River)	Virginia-Maryland	\$1,700
<i>Midtown-Kennedy Airport Rail Link</i> (Subway extension to JFK using DBOM Concession)	New York, NY	\$800
<i>Port of Seattle Intermodal Facility</i> (Container Terminal Concession)	Seattle, WA	\$300
<i>Farley/Penn Station Project</i> (Renovation of Post Office for Amtrak Terminal)	New York, NY	\$315
TOTAL PROJECTS		\$6,675

STANDBY REVENUE ENHANCEMENTS

PROJECT DESCRIPTION	LOCATION	TOTAL COST*
<i>Tacoma Narrows Bridge</i> (Double Deck Toll Bridge)	Seattle-Tacoma, WA	\$800
<i>Foothills-South Transportation Corridor Agency</i> (Extension of Congestion Reliever Toll Road)	Orange County, CA	\$1,500
<i>SR 125 Motorway</i> (10 mile Toll Road under Calif. AB 680)	San Diego, CA	\$400
<i>SR 91 Extension</i> (10 mile High Occupancy/Toll "HOT" Concession)	Orange County, CA	\$125
<i>I-895 Connector</i> (6 mile Bridge/Connector Toll Road)	Richmond, VA	\$250
<i>James River Motorway</i> (17 mile extension to Powhite Parkway)	Richmond, VA	\$255
<i>Route 1 Toll Road</i> (Toll concession)	Delaware	\$240
<i>Southern Connector</i> (17 mile Toll Road Bypass)	Greenville, SC	\$140
TOTAL PROJECTS		\$3,710

*Federal Share would not exceed 33% of Total Project Costs

Indicative Project Candidates for Federal Credit (cont'd.)

DEVELOPMENT RISK INSURANCE

PROJECT DESCRIPTION	LOCATION	TOTAL COST*
<i>Florida Overland Express</i> (325 mile High Speed Rail Concession)	Miami-Orlando-Tampa, FL	\$ 5,300
<i>Phoenix Motorway System</i> (5 High Occupancy/Toll "HOT" Roads)	Phoenix, AZ	\$2,000
<i>Minnesota Highway 212</i> (Congestion Pricing Toll Road)	Twin Cities, MN	\$195
<i>WSDOT SR 522</i> (10 mile 4 Lane Tollway)	Washington	\$155
<i>Gowanus Tunnel</i> (4 mile Tunnel Tollway)	Brooklyn, NY	\$2500
TOTAL		\$10,150

*Federal Share would not exceed 40% of Development Costs, capped at \$ 5 million per project.

Fine-Tuning ISTEA: Environmental Assessment and Recommendations

U.S. Environmental Protection Agency

November 27, 1996

Draft--For Discussion Purposes Only

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Cool Communities

For additional information, please contact Robert Wolcott, Deputy Assistant Administrator, Office of Policy, Planning and Evaluation (202-260-4335), Ken Adler (202-260-6925), or the contacts listed at the bottom of the issue papers.

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Summary ISTEA Reauthorization Recommendations

Congestion Mitigation and Air Quality Improvement Program

CMAQ funding should be made available to all non-attainment areas, including any new ones as a result of revised NAAQS. In addition, the Agency believes that air quality is best served by a CMAQ program that encourages long-term, rather than shorter-term, air quality improvements, and discourages investment shortfalls in other areas from diverting CMAQ funds. One way to prevent these shortfalls would be to stipulate in ISTEA that a percentage of CMAQ funds could not be used for projects that can be funded out of other sources, such as transit and signalization.

Although originally intended for use in non-attainment areas, CMAQ funds now continue to be available to areas that have been redesignated to attainment status and have an approved maintenance plan. EPA would like to see this flexibility continue. Restricting funds to non-attainment areas creates an incentive to avoid redesignation or to revert back to non-attainment once an area has achieved healthy air quality. Many TDM strategies are long term initiative that must maintain small but steady levels of funding over a longer term than capital investment types of projects. Making funds available to maintenance areas would help ensure a source of funding for projects that have implementation and operating horizons beyond the areas projected attainment date.

Given that CMAQ funds must be requested by a governmental body with authority to receive federal funds, the Agency believes that the public involvement and notification requirements for CMAQ proposals should be strengthened. This will help ensure that nongovernmental organizations, especially environmental stakeholders, have an opportunity to participate in the proposal and selection process.

We also believe that project selection criteria should be established to complement required guidance on project eligibility criteria. At present, the relative emissions benefit of projects are not always considered in the project selection process. Meeting eligibility criteria should not be viewed as the sole determinant of whether or not a project receives CMAQ funding. The Agency is confident that we can work more closely together to make the selection process more responsive to our collective needs.

The Enhancements Program

We suggest that the Administration develop and advance options to better target enhancement funds to produce the greatest social and environmental benefit per dollar. One mechanism to do this would be to integrate funding decisions under the Enhancement Program with existing planning and management requirements. For example, Comprehensive Conservation and Management Plans, and State Coastal Management Plans (required under the CWA and CZARA) and other watershed/basin plans would provide a good mechanism for identifying priority projects.

The Enhancement Program should also be broadened to include a pilot wetland and riparian protection and restoration program that could mitigate historic wetland and riparian losses attributed to

transportation projects. In addition, funds should be made available, through an appropriate ISTEA funding mechanism, to establish mitigation banks to facilitate the permitting of future highway projects.

We also suggest increased support to reduce stormwater runoff and to remediate adverse impacts in coastal areas associated with transportation infrastructure and activities. Implementing the ISTEA reauthorization recommendations in the *Interagency Report on the Dredging Process* (December 1994), which would link planning with dredging of port channels, should also be a priority.

Planning and Performance Standards and Incentives Fund

Incentives Fund EPA proposes that a fund be established to provide a positive incentive for the expanded use of planning and performance standards. Planning and performance standards, which are system- and access-based, not vehicle-based, can provide a flexible yet effective mechanism to encourage MPO and State development of RTP alternatives that produce positive environmental results, to use selection criteria that factor in air and water quality and community concerns, to do analyses that address the full cost and impacts of the decisions. Incentive funds would be used to help defray the cost of environmental enhancing projects, and to develop and facilitate the use of MPO and State planning and performance standards.

Planning and Performance Standards Language should be inserted in ISTEA that provides for the development of environmental and community-based performance standards. Examples of these standards include:

- accessibility via all modes of transportation,
- amount of vehicle trips and mileage,
- energy consumption,
- land to be consumed by proposed development,
- area to be paved,
- long-term cost-effectiveness ,
- proportion of the area that is pedestrian/bicyclist friendly, and
- degree to which driving costs are covered by use-based charges.

ISTEA should require that DOT, EPA, DOE, and HUD work together to define factors for development, monitoring, and reporting of these performance standards, and that MPOs and States work with environmental and community agencies and the public to establish state and MPO specific performance standards and goals. Incentive funds should be provided to help pay for these activities. We should also continue to support fiscal constraints for Transportation Improvement Plans and Regional Transportation Plans, and encourage MPOs to coordinate their planning efforts within the relevant air boundaries. MPO modeling capabilities should also be given greater support.

Require MPOs to establish public participation performance standards MPOs should be required to establish performance standards tailored for their own public involvement process that provides complete information, timely public notice, and full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs, including the RTP alternatives,

selection criteria, and analytic processes. MPOs' self-certification and DOT's certification processes should be explicitly required to assess the degree to which performance standards are met, and DOT should be required to actively seek public input regarding the adequacy of MPOs' public participation processes.

Brownfields Restoration

The Agency believes that ISTEA should include a declaration of policy that the National Intermodal Transportation System will implement the principles of brownfields economic redevelopment in coordination with transportation projects. The Agency requests that metropolitan planning organizations should consider brownfields assessment, cleanup and redevelopment in developing transportation plans and projects. Finally, the agency proposes that ISTEA's program structure be expanded and clarified to allow transportation program funds to be used for brownfields assessment, cleanup and redevelopment linked to any transportation infrastructure project, including NHS, STP, STP enhancements, bridge programs, transit projects, and State infrastructure banks.

Funding

EPA supports ISTEA's current funding structure which includes some dedicated funds and some flexible ones. The benefits of this system could be enhanced with some minor changes including: 1) increased support of public transit, 2) increased support of intermodal freight efficiency, and 3) increased funding to metropolitan areas and MPOs to promote local decision making and to align spending authority with responsibilities and challenges. Lastly, reauthorization ought to ensure fair proportions in allocations and strengthen the coordination mechanism between states and MPOs.

Voluntary Parking Cash Out

The federal tax code subsidizes free, employer-provided parking spaces for commuters. This subsidy amounts to \$19 billion per year. Cash Out would allow employers to offer employees taxable cash salary instead of free parking, without negative tax consequences. This tax code change would allow any employer to offer Parking Cash Out without incurring negative tax penalties, and any state to enact and enforce laws on Cash Out without creating tax problems for its residents, but would not require any action on the part of employers, employees, or states. Federal tax revenue from Voluntary Cash Out would equal about \$1.6 billion over six years.

No Exemptions for Stormwater

Industrial operations owned or operated by small municipalities should not be exempted from stormwater regulations, as was done in the original ISTEA legislation. Working with a variety of key stakeholders, EPA is now working on a common-sense consensus approach for addressing these sources through our Phase II stormwater program. ISTEA could play a positive role by helping to fund this Federal mandate.

Congestion Mitigation and Air Quality Improvement Program

Background

In 1991, ISTEA created the CMAQ Program and authorized \$6 billion for the years 1992-1997 for the purpose of funding projects and programs within non-attainment areas, that will contribute to the attainment of the National Ambient Air Quality Standards (NAAQS). Funds were originally apportioned to the states based upon the relative population within their ozone non-attainment areas. However, all states are to receive a 1/2 percent minimum and Congress has elected to hold apportionments at the 1994 level. Allocation from the state to local governments varies from state to state, with some passing the funds directly through to MPO's for use at their discretion and other states tightly controlling the decisions on how the funds are spent.

ISTEA's flexible guidelines allowed DOT to issue eligibility guidance that cuts across traditional modal boundaries and makes the funds available for highway, transit and non-traditional program areas. Transit and traffic flow improvement projects have received the greatest share of available funding. Together they make up about 75% of CMAQ expenditures. This bias toward traditional transportation improvement projects has led to criticism that these funds are not being used as intended by Congress. Critics say that the emission reductions from these projects will soon be offset by the increased travel activity induced by reduced travel times. Advocates of these projects point to the emission reductions attributed to higher speeds and less stop and go traffic.

A Unique Opportunity to Address Air Quality Issues

A designated air quality improvement program such as CMAQ is an invaluable tool for air quality and transportation planners because the pool of potential projects is (largely) restricted to non-attainment areas. Furthermore, unlike many other federal-aid transportation programs, it is not limited to traditional highway uses, and can fund Travel Demand Management (TDM) such as park and ride lots, car and van pool programs and public education. CMAQ also funds unique Transportation Control Measures (TCMs) such as alternative fuel vehicles and facilities, bicycle and pedestrian facilities and Inspection and Maintenance programs. If TCMs are included in a State Implementation Plan (SIP), those projects are given priority over others.

Success of the CMAQ Program

A trend analysis of data collected since 1990 shows some encouraging environmental results that are, in part, related to CMAQ. Specifically, over a five year period ending in 1995, 27 of an original 98 areas that did not meet health standards for ozone were redesignated as

attainment areas. In addition, another 18 areas did not record a violation from 1992 to 1994, and therefore, have achieved the first step towards redesignation. This translates into a health benefit to roughly one-third of the original 140 million people that living in areas that violated the ozone standard. These data also show that 33 of the 42 areas not meeting the standards for CO in 1990 are now in compliance. Clearly, the CMAQ program cannot claim all the credit for these achievements, but it is certainly a part of the tool kit that planners used to accomplish these environmental gains.

While the program is not without its critics, it has produced innovative and successful projects with air quality benefits. The following examples illustrate the breadth of the program:

- The Clean Air Campaign in Phoenix, AZ -- a public outreach and education program;
- The Freeway Service Patrol in San Francisco, CA -- an incident management program;
- The Walkway to Gateway Project in Cleveland, OH -- an elevated climate controlled pedestrian platform; and
- Facilities and equipment for an Enhanced Inspection and Maintenance program for the State of Indiana.

These successes would have been difficult or impossible to orchestrate under past programs. Moreover, the transportation planning process is now more inclusive and allows these projects to compete on an equal footing based on their ability to produce air quality benefits. The program has also been successful at giving more authority to MPO's by moving toward more local government and public involvement in transportation investment decisions.

ISTEA Recommendations

CMAQ funding should be made available to all non-attainment areas, including any new ones as a result of revised NAAQS. In addition, the Agency believes that air quality is best served by a CMAQ program that targets long-term air quality projects, rather than by focusing on shorter-term benefits, which is the current practice, and allowing investment shortfalls in other areas to divert CMAQ funds. One way to prevent these shortfalls would be to stipulate in ISTEA that a percentage of CMAQ funds could not be used for projects that can be funded out of other sources, such as transit and signalization.

Although originally intended for use in non-attainment areas, CMAQ funds now continue to be available to areas that have been redesignated to attainment status and have an approved maintenance plan. EPA would like to see this flexibility continue. Restricting funds to non-attainment areas creates an incentive to avoid redesignation or to revert back to non-attainment once an area has achieved healthy air quality. Many TDM strategies are long term initiative that must maintain small but steady levels of funding over a longer term than capital investment types

of projects. Making funds available to maintenance areas would help ensure a source of funding for projects that have implementation and operating horizons beyond the areas projected attainment date.

Given that CMAQ funds must be requested by a governmental body with authority to receive federal funds, the Agency believes that the public involvement and notification requirements for CMAQ proposals should be strengthened. This will help ensure that nongovernmental organizations, especially environmental stakeholders, have an opportunity to participate in the proposal and selection process.

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Draft--For Discussion Purposes Only

The Transportation Enhancements Program

Background

The Surface Transportation Program (STP) is among the broad funding categories created by ISTEA. This highly flexible program allows States and Local Governments to fund a wide variety of transportation related activities. In particular, ISTEA requires that States set-aside 10 percent of their STP funds for specific Transportation Enhancements Activities (TEA). TEA's must be related to transportation projects, but not be a part of new construction or rehabilitation projects for which funding would include enhancements as part of the project. The following 10 categories of project activities are eligible for funding: bicycle and pedestrian facilities; acquisition of scenic easements and scenic or historic sites; scenic or historic highway programs; landscaping and scenic beautification; historic preservation; rehabilitation and operation of historic transportation buildings, structures or facilities; preservation of abandoned railway corridors; control and removal of outdoor advertising; archaeological planning and research; and mitigation of water pollution due to highway runoff. Nation-wide, \$2.8 billion were made available over a 6-year period (1992-1997) to fund transportation enhancement activities. EPA strongly recommends that the 10% set-aside be retained to ensure that environmental objectives addressed under TEA's can be achieved.

Unique Opportunity to provide Environmental Benefits

Certainly there is a great deal of variation in the extent to which activities allowed under the enhancement provisions provide environmental amenities. Some can result in direct benefits by reducing non-point discharges and/or providing alternative modes of transportation, while others can be tailored to achieve environmental benefits by coordinating the preservation of riparian areas, wildlife habitats, and wetlands with the expressed goals of the TEA (e.g., landscaping and scenic beautification; mitigating water pollution due to highway runoff). Leveraging the use of funds available under the enhancements provisions can yield significant benefits that are ecologically important, and due to visibility, widely popular. This in turn could result in broader support for related environmental initiatives with complementary outcomes.

One enhancement activity of significance to the water program is the mitigation of water pollution due to highway runoff which may include constructed wetlands and other Best Management Practices (BMP). This transportation enhancement activity can also be effective in retrofitting drainage and runoff pollution control systems along existing highways and bridges with inadequate structural systems. As of February, 1996, 26 States funded 121 projects under the highway runoff mitigation category accounting for 1.5 percent of the enhancements funds. Over the same period, rail-to-trails, historic preservation (including transportation facilities) and bicycle and pedestrian facilities accounted for 75 percent of available funds. While the environmental benefits of these later activities is less direct, they are not insignificant.

Implementation of TEA's that lessen congestion, improve air quality, control runoff pollution, and restore abandoned corridors, provide sustainable environmental benefits. Reauthorization of ISTEA's enhancement provisions can provide local municipalities and states with the tools to help protect water quality by strengthening measures to control erosion and sedimentation from road and highway construction, polluted water runoff from operation and maintenance of transportation systems, and preserve sensitive habitats and riparian areas within watersheds.

Successes of TEA Program

There has been overwhelming support for the transportation enhancement provisions. Among the many successful projects are the construction of detention ponds, wetlands restoration, erosion and sediment controls, and storm drainage structures. A brief list of these and other projects resulting in environmental benefits include:

- Straight Creek Project, Arapaho National Forest, Colorado -- Erosion and sediment containment structures constructed along an 8 mile stretch of I-70 to prevent polluted runoff from reaching Straight Creek.
- The Farmington Canal Linear Park Project in Cheshire, Conn. -- Revitalization of an abandoned transportation corridor that provides a greenway for wildlife.
- City of Newburyport, MA Stormdrains Project -- Stormdrain improvements made to prevent polluted runoff from the city streets to contaminate shellfish beds in the Merrimack River estuary.
- Schuylkill River Heritage Park Pathway in Philadelphia, PA -- A multi-use pathway that provides recreation and commuting opportunities, therein alleviating congestion, improving air quality, and providing stream bank protection
- Woodbridge Station Renewal Project in Woodbridge, NJ -- A station renovation project that increased the use of "alternative" modes of transportation.

ISTEA Recommendations

ISTEA's flexibility regarding the allocation and use of funds is among its greatest benefits. Based on their priorities, states and localities have a great deal of discretion in terms of the allocation and expenditure of funds. For example, up to 100 percent of STP funds (\$23.9 billion) can be programmed such that they are used solely for transit projects. In addition, up to 50 percent of NHS funds (\$10.5 billion) can automatically be transferred to STP projects, and if the Secretary approves, all \$21 billion can be transferred to the STP. Realistically, all available funds will not be used for innovative transportation strategies or environmental initiatives; some construction and maintenance will always be desired. However, giving stakeholders the

opportunity to provide input regarding the best use of ISTEA funds will enhance the likelihood that environmentally beneficial investments will be made. Specific recommendations include:

- We suggest that the Administration develop and advance options to better target enhancement funds to produce the greatest social and environmental benefit per dollar. One mechanism to do this would be to integrate funding decisions under the Enhancement Program with existing planning and management requirements. For example, Comprehensive Conservation and Management Plans, and State Coastal Management Plans (required under the CWA and CZARA) and other watershed/basin plans would provide a good mechanism for identifying priority projects.
- The Enhancement Program should also be broadened to include a pilot wetland and riparian protection and restoration program that could mitigate historic wetland and riparian losses attributed to transportation projects. In addition, funds should be made available, through an appropriate ISTEA funding mechanism, to establish mitigation banks to facilitate the permitting of future highway projects (see Wetlands Issue Paper for more details).
- We also suggest increased support to reduce stormwater runoff and to remediate adverse impacts in coastal areas associated with transportation infrastructure and activities. Implementing the ISTEA reauthorization recommendations in the *Interagency Report on the Dredging Process* (December 1994), which would link planning with dredging of port channels, should also be a priority.

The concept of transportation enhancements under ISTEA introduced a new direction for transportation policy. Enhancement activities can link existing transportation systems with the goals of preserving community quality and environmental protection. We now have an opportunity through ISTEA reauthorization to strengthen the environmental provisions within the framework of long-range transportation planning, and in the operation and maintenance of transportation systems.

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Public Participation in ISTEA

The public participation requirements in ISTEA should be strengthened. A reauthorized ISTEA should place more emphasis on local accountability for the performance of the public involvement process. Basic elements of effective public participation need to be clearly articulated, and areas should be required to establish performance standards that the MPO's self-certification and DOT's certification will use to judge progress. Failure to satisfy basic elements of public participation should have real consequences for conformity and certification.

The existing ISTEA language simply requires that metropolitan planning organizations (MPOs) offer the public a reasonable opportunity to comment on the transportation plan and transportation improvement program. This requirement is so minimal that weakening it would be disastrous, in effect denying that the public has a right to be involved in transportation planning. Although some parties have testified that areas need more flexibility in meeting public participation requirements, an examination of ISTEA language shows that this suggestion is without merit.

The metropolitan planning regulations that implement ISTEA provide more detail on public participation requirements, but even these simply articulate the basic elements of public participation: complete information; timely public notice; full public access to key decisions; and early and continuing involvement. These elements should be confirmed in ISTEA.

Environmental Importance

Ongoing and inclusive public participation is the key to providing a transportation system that serves communities' mobility needs in an environmentally sustainable manner. Public participation highlights the effects of transportation decisions on the environment and other important community quality of life issues. If communities have information about transportation options and their impacts, they can develop integrated strategies to achieve their social, economic, and environmental goals. For these reasons, EPA is itself increasingly emphasizing community-based environmental protection efforts.

With respect to transportation planning specifically, effective public outreach informs the public of key regional transportation issues, helps ensure that plans and programs contain projects truly needed by the public, and identifies difficulties with projects early in the planning process.

Success Stories

In Montana, rural residents who opposed plans to widen US 93 instead organized a rural transportation management association for car and vanpooling--and have begun research on public transportation options. Together, these measures could save millions in construction costs and reduce environmental impact.

In Albany, NY, the MPO involved the public in brainstorming sessions and focus groups prior to formulating a draft five-year TIP. The resulting plan placed a greater emphasis on maintenance, environmental needs, and quality of life investments than previous plans.

ISTEA Recommendations

- **Articulate basic elements of public participation** A reauthorized ISTEA should provide a policy statement requiring that areas develop a proactive public involvement process that provides complete information, timely public notice, and full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs.
- **Require MPOs to establish performance standards.** Because ISTEA does not require specific public participation techniques or processes, MPOs should be required to establish performance standards tailored for their own public involvement process. Such performance standards should address both process issues (e.g., timely notice, full access to information) and actual results (e.g., number of citizens/groups commenting or attending forums).
- **Require accountability for meeting performance standards** MPOs' self-certification and DOT's certification processes should be explicitly required to assess the degree to which performance standards are met. DOT should be required to actively seek public input regarding the adequacy of MPOs' public participation processes.
- **Require DOT oversight and real consequences for basic failures** Areas without established public involvement processes (as required by 450.316(b)(1)(i)) should not be certified. DOT should be explicitly required to independently review MPOs' compliance with the public participation requirements of the metropolitan planning rule when DOT determines the conformity of transportation plans and programs. (Compliance with these public participation requirements is already a criterion for determining conformity.) DOT should refuse to determine conformity when there is failure to satisfy basic elements of public participation (e.g., failure to provide opportunity for comment and respond to comment before approving a plan or TIP).

The above proposals would address these weaknesses of the current public participation provisions, while still providing maximum flexibility for MPOs to design public involvement procedures that suit their unique circumstances. It is clear that different public involvement techniques make sense in different areas, and different techniques make sense over time. Because it is not possible to mandate specific procedures, the most appropriate action is to clearly articulate basic elements, require performance standards to be established, and ensure accountability.

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Brownfields Redevelopment Opportunity

The U.S. EPA defines Brownfields as abandoned, idled, or under-used industrial and commercial properties where expansion or economic redevelopment is complicated by the threat of environmental contamination. The extent of the brownfields problem is still unknown; the General Accounting Office (GAO) estimated that there are approximately 425,000 brownfields across the country.¹ Many of these sites are located in urban areas. In particular they are located in old industrial neighborhoods which could benefit from new development and in cities that have failed to attain Clean Air Act (CAA) National Ambient Air Quality Standards. Since the Intermodal Surface Transportation Efficiency Act (ISTEA) includes linkages with the economy, infrastructure, and the environment, addressing brownfields in ISTEA's reauthorization reinforces ISTEA's mandate to meet the Nation's economic, mobility, accessibility, and livability needs. This proposal integrates brownfields in ISTEA's reauthorization to help link transportation policy to community revitalization, gain (or keep) CAA attainment, and make more efficient use of new or existing transportation infrastructure.

Background--EPA's Brownfields Initiative

Economic and demographic shifts, along with complications of environmental liability, cleanup standards, and the rapid development of previously undeveloped land at the ex-urban fringe have left many old industrial and commercial areas idle, underutilized or completely abandoned. These factors have created fiscal problems for many cities. They have become default owners of brownfield properties. Fiscal constraints have slowed down the redevelopment because cities do not have the capital to assess or clean up these abandoned brownfields.

EPA's Brownfields Economic Redevelopment Initiative empowers States, communities, and other stakeholders in economic redevelopment to work together to assess, clean up , and sustainably reuse brownfields. The brownfields dilemma inherently requires a comprehensive solution. Brownfields Initiative strategies include funding pilot projects and other research efforts, clarifying liability issues, entering into partnerships with other Federal agencies, supporting State voluntary cleanup programs, developing job training programs, and addressing environmental justice concerns. In August 1996, President Clinton proposed a major expansion of the Brownfields Initiative to more than 300 cities over the next four years.

1

United States General Accounting Office. "Report to the Chair, Committee on Small Business, House of Representatives, Community Development: Reuse of Urban Industrial Sites," June 1995, p. 3.

EPA and other Federal agencies, including the Department of Transportation, are participating in a Federal interagency working group to develop a national action agenda for brownfields.

Brownfields are viewed by many as opportunities for revitalizing urban communities. Redevelopment of brownfield sites may reduce health risks, create jobs, provide services, enhance transit ridership, restore green spaces, increase local tax revenues, and improve the overall livability of urban neighborhoods. Left undeveloped, however, brownfield areas remain unproductive, generate little or no economic benefits, and are socially and environmentally detrimental to the surrounding community.

The Transportation and Brownfields Link

Transportation issues are critical to the sustainable redevelopment of brownfields. Environmental cleanup linked to transportation projects allows the reuse of urban land with existing infrastructure and provides the access to transportation that is vital to successful community revitalization. Through the interagency working group and its own internal efforts, DOT is contributing to successful brownfields redevelopment by ensuring that transportation access is considered in brownfields development, working with the transportation industry to encourage use of brownfields in transportation projects, and removing policy barriers to the redevelopment of brownfields. The importance of these efforts are reinforced by the recommendations of the President's Council on Sustainable Development that stress the links between transportation, the environment, and sustainable development

Just as there is a link between transportation infrastructure and brownfields, there is also a link with brownfields, air quality, and vehicle miles traveled (VMT). Rapid development at the ex-urban fringe is increasing the number of trips per house-hold and the vehicle miles traveled. Today, vehicle emissions (as a function of growth in the number of VMT by cars, trucks, and buses) are major contributors to smog and other air pollution. Redevelopment of brownfields could result in slower future growth in VMT. Development in mixed use centralized areas allows access to the site by alternative modes (such as transit, bicycle or walking modes) and those that choose to drive usually have shorter trips. However, current patterns of transportation investment lead the private sector to choose to develop previously undeveloped land (i.e., greenfields) in the ex-urban fringe rather than the brownfields that are left behind in the urban center cities, with concomitant increases in VMT. Locating future development on brownfields, as opposed to on the ex-urban fringe, will result in slower future growth in VMT, increased transit ridership, decreased congestion, and off-set future air quality problems.

ISTEA and Brownfields Redevelopment

Reauthorization of ISTEA provides an opportunity to leverage the transportation advantages of redeveloping brownfield sites. Transportation expenditures to clean up and reuse brownfields sites may be a more efficient use of new or existing transportation infrastructure. The environmental benefits are clear: the clean up of contaminated properties in blighted communities and slower growth in VMT. The economic and community benefits are just as tangible:

Leveraging capital. Municipalities require financial resources to assess, clean up, and redevelop brownfields, particularly when the municipality is the owner. Communities work with a variety of State and Federal agencies, as well as the private sector, to provide funds for brownfields redevelopment. Transportation funds can be an important source of capital for the transportation aspects of brownfields projects.

Access to transportation and increased mobility. Not only is access to transportation a critical factor in making real-estate attractive, but it is also essential in increasing access to jobs and services, especially for lower income communities that rely on transit accessible employment and transit-oriented communities.

Improvement of existing road infrastructure. This is closely related to increasing the access to transportation. However, since brownfields are already in developed areas, the existing infrastructure may need only minor improvements. For a small investment, the economic benefits can go a long way by increasing property values and attracting subsequent development in the general vicinity of the brownfield.

Recommendations for ISTEA Reauthorization

1. **Policy Statement.** Include a policy statement affirming that the National Intermodal Transportation system will implement the principles of brownfields economic redevelopment in coordination with transportation projects.
2. **Expand and Clarify Brownfields Eligibility for Existing Funds.** Include brownfields activities related to transportation projects as eligible uses of transportation funds for example, Surface Transportation Program (STP) and National Highway System (NHS) funds.
3. **State Infrastructure Banks.** Permit SIBs to be used for brownfields assessment, cleanup, and redevelopment in any of the projects funded with SIB moneys.
4. **Clarify Current Enhancements Set-Aside.** The current Enhancements set-aside could be clarified to include brownfields activity.
5. **Improve and Strengthen Planning.** Include brownfields in the planning factors and considerations for Metropolitan Planning Organizations and State transportation planning.

Expand the *Mobility and Access for People and Goods* factors to include enhancement of *multimodal* transit systems via brownfield redevelopment projects.

6. Increase The Cap On The Industrial Development Bond Authority. Providing federal tax credits to redevelopers for environmental cleanup and redevelopment costs at transportation-related brownfields sites would make these sites more compatible with comparable greenfields for private investment capital. Making such costs eligible for tax-free industrial development bond financing without limitation by the state bond cap would make it easier for local governments to secure financing for transportation relevant brownfields redevelopment projects.

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Historic Wetland Restoration Pilot Program

Background

The Federal Highway Program, while providing needed improvements to the nation's transportation infrastructure, has also resulted in adverse environmental impacts including the loss and degradation of wetlands and other habitats. The U.S. Department of Interior, for example, has reported that, after agricultural programs and multipurpose water projects, the Federal Highway Program was the most often cited federal cause of wetland losses in the national study area (Apogee, 1996). This highway program has led to significant direct and indirect wetland losses. For example, the highway system has historically increased the demand for development outside urban areas, and has in some cases, helped facilitate wetland conversions for housing and commercial development. In addition, road-side ditches provided easy drainage outlets for agricultural wetland conversions.

Increased consideration of environmental concerns in transportation planning processes has helped to reduce adverse environmental impacts from recent highway projects. Mitigation banking, for example, has improved the effectiveness of efforts to mitigate unavoidable wetlands impacts of future highway projects. However, to date, the Federal government has not taken steps to redress the impacts of past Federal Highway Program projects. In similar instances, the Federal government has developed programs to mitigate for historic wetland losses. For example, USDA has an ambitious restoration program implemented through the Wetland Reserve Program and the Conservation Reserve Program. Similarly, the Corps of Engineers has an aquatic ecosystem restoration program implemented through the Water Resources Development Act. EPA therefore believes that the upcoming ISTEA reauthorization process provides an opportunity to include a program to address wetland losses from past highway projects.

Environmental Importance and Justification

Wetlands are widely recognized as valuable ecosystems. Yet past highway projects have resulted in the loss and degradation of these systems. A preliminary analysis indicates that wetland losses directly attributed to road construction range between 180,000 to 400,000 acres (Apogee, 1996). This estimate, however, does not account for substantial indirect losses due to induced development or enhanced agricultural drainage. Fortunately, wetlands restoration efforts can undo some of this damage and result in considerable environmental benefits to communities including: enhanced and increased wildlife habitat areas, improved water quality (e.g., through reduced sedimentation/erosion control), and better flood conveyance and flood storage.

Opportunities for ISTEA reauthorization

The Agency would like to propose a new initiative that is designed to offset wetland losses that occurred as a result of historic highway construction, as well as ensure adequate funding for mitigation banking. Two options for this initiative follow:

1. Under the existing Enhancement Program, specifically identify wetland and riparian restoration as an activity that should be funded to offset historic impacts from transportation projects. A percentage of funds from the Enhancement Program could be set aside for such purposes. Additionally, funds could be made available, either from the Enhancement Program or through another appropriate funding provision within ISTEA, for the establishment of mitigation banks to offset impacts from future highway projects. By including funds for mitigation banking, the Federal government could both increase the efficiency of the permitting process for highway projects and maximize environmental benefits from compensatory mitigation efforts. Funds undertaken for such purposes would be reimbursed upon use of wetland credits for specific highway projects.
2. Alternatively, establish a new and separate program that provides funds for addressing historic wetland and riparian losses due to highway projects. This program could also be broadened to address historic impacts to other valuable habitats (e.g., prairies, mature forests). Under a new wetland restoration program, funding could also be provided for the establishment of mitigation banks to offset impacts from future highway projects.

The Agency envisions a relatively small program that could restore 50,000 to 150,000 acres over a 5 year period. Based on our experience, we expect that spending will be modest during the start-up phase of the program and will pick up considerably as it gains popularity and attention.

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November 27, 1996

Environmental Impact Statements and Major Investment Studies

Background

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) is due for Congressional reauthorization in 1997. One hallmark of the ISTEA is the emphasis it placed upon the metropolitan planning process. The Major Investment Study (MIS) is a long range planning tool developed by the Department of Transportation (DOT) and used by metropolitan planning organizations (MPOs) to assess major transportation needs and to begin to develop options for solutions. Section 450.318 of the 1993 Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) joint "Statewide Planning; Metropolitan Planning Rules" [23 CFR Part 450, 23 CFR Part 613] call for a major investment study, "where the need for a major metropolitan transportation investment is identified, and Federal funds are potentially involved, major investment (corridor or subarea) studies shall be undertaken to develop or refine the plan and lead to decisions by the MPO, in cooperation with participating agencies, on the design concept and scope of the investment."

The FHWA and the FTA modeled the MIS analysis from NEPA requirements and provided the MPOs with two implementation options. MPOs may either complete the MIS before commencing analysis under the National Environmental Policy Act (NEPA), or, because the MIS incorporates so many of the principals found in NEPA, MPOs may combine the two analyses into one joint document. As part of the Administration's reauthorization effort underway, EPA is examining the effectiveness of these two options.

Successes and Environmental Impact

The MPO's are still very much on the "learning curve" in implementing the MIS process, particularly as it relates to the Federal NEPA process interface. There appears no clear trend as to whether option 1 (separate processes) or option 2 (joint processes) are being consistently used.

The option that is eventually used in a particular situation may well depend more on the timing of the project than anything else. That is, if the actual construction of the project is greater than 5 years the use of the joint process could well require that a supplemental NEPA document be prepared to assess new or changed impacts at the time construction is proposed.

Issues with option 1:

- potential for incomplete environmental (MIS) analysis
- lack of Federal participation at the MIS stage.
- incorporating MIS decision into subsequent EIS is not well defined

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Issues with option 2:

- some states reluctant to combine documents
- better assurance of Federal concerns

ISTEA Recommendations

EPA believes the current flexibility to do the MIS before or jointly with the NEPA analysis should be maintained. EPA sees no need to alter this arrangement legislatively, but would like to work with the DOT to enhance current guidance on the joint NEPA/MIS documents. While EPA prefers to see the analyses combined into one document, EPA recognizes the importance of flexibility in the planning process and also would like to work with the Department of Transportation to enhance the analyses performed by the MPOs at this early point in the planning process. The scope of analyses for the MIS and for NEPA analysis are not identical, and therefore, MPOs which choose to do the MIS alone may have to examine alternatives from a different perspective under the NEPA process. On the surface this seems duplicative; however, EPA believes the basic concepts are valid and not in need of legislative review. EPA thinks what is needed is better involvement of the federal resource agencies earlier and at the local level, and not an additional federal "handle." EPA is concerned, however, that current resource levels within EPA do not allow EPA to become as involved in these early planning steps as might be desired by MPOs and the DOT.

In order to help in the overall understanding and implementation of the MIS requirements, FHWA is offering a training program for major investment studies that is directed towards MPOs, state DOT's and other interested agencies (both federal and state). This training is also open to EPA staff. Appropriate EPA Regional staff should be encouraged to attend.

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MPO Structure, Scope, and Funding

Background

Metropolitan areas are home to 80% of citizens in the United States. Transportation, land use, communication, commerce, recreation and other interrelated systems are woven together each day in metropolitan areas to serve this citizenry. ISTEA's expansion of Metropolitan Planning Organizations' powers and responsibilities in 1991 was a profound recognition of the need for coordination and decision-making at the metropolitan scale to better manage these systems interactions. Indeed, ISTEA provides local governments with a venue in which to view their jurisdictions and interactions as a system and manage them to create a functioning, livable metropolitan area.

To ensure that these goals were met ISTEA specified several requirements for MPO structure, boundaries and funding. Some of these are listed below.

- ISTEA designates that urbanized areas with populations in excess of 50,000 must have an MPO. (section 1024(a), 23 USC 134(b))
- MPOs are established by agreement between the governor and local general purpose governments representing 75% of affected population in the metropolitan area. (section 1024(a), 23 USC 134(b) (5) (B))
- MPOs must consider 16 planning factors including social, economic, energy, environmental and land use effects of transportation decisions. (section 1024(a), 23 USC 134(f))
- MPOs boundaries must cover the currently urbanized area, the area expected to be urbanized in the next twenty years, and encompass Clean Air Act non-attainment areas for Carbon Monoxide and Ozone. (section 1024(a), 23 USC 134(c))
- MPOs have funds directly allocated to them under ISTEA. (section 1024(b), 23 USC 104(f) (1))

These specifications begin to ensure that metropolitan transportation systems are managed at a scale appropriate to the area's transportation, environmental and other regional goals. They take steps to increase local representation and, through planning factors, diversify the scope of considerations used in transportation decision-making. The direct allocation of funds also provides MPOs with resources needed to meet their obligations.

Successes and Environmental Impact

The increased MPO responsibilities and changes in decision-making processes outlined in ISTEA have taken time to implement at the federal, state and local levels. For instance, the newness and complexity of the issues involved meant that 22 months were needed to issue ISTEA's federal planning regulations. These up-front costs have now largely been paid and ISTEA is generating results. MPOs have engaged in regional decision-making and aided cooperative local planning to achieve better environmental and transportation results. They have also brought a wider spectrum of opinions and perspectives to bear on transportation decisions through more inclusive and representative decision-making processes.

For instance, the Albany, NY MPO's desire to manage transportation investments to serve, not just transportation goals, but the metro areas multiple regional goals has led the MPO to initiate "New Visions." This is a program to calculate and use the total costs of transportation projects including traffic jams, environmental factors and larger economic impacts. This comprehensive accounting is unprecedented and includes costs and benefits traditionally ignored by highway planners but of great importance to the region. Similarly, the Madison, Wisconsin MPO developed an investment evaluation system based on the multiple regional planning factors identified in ISTEA. This put transportation modes on a level playing field for investment dollars and shifted funds towards transit, bicycle and pedestrian projects.

Portland, Oregon is one of the best-known examples of a truly regional MPO using an open inclusive planning process to spur cooperation amongst local governments and build citizen support for transportation investments. Unlike most MPOs Portland's is directly elected by the citizens of the Portland metropolitan area. As such they are directly accountable to the citizens of the region. Responding to strong citizen interest in transportation and land use the MPO worked in partnership with citizen groups to identify new ways to address congestion and air quality issues. As a result, they came up with a plan that stresses more mass transit, preservation of natural areas, traditional urban density land uses, and one which may reduce congestion by as much as ten percent. This plan is being implemented and enjoys strong citizen support.

ISTEA Recommendations

MPOs should be required to establish performance standards tailored for their own public involvement process that provides complete information, timely public notice, and full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs, including the RTP alternatives, selection criteria, and analytic processes. MPOs' self-certification and DOT's certification processes should be explicitly required to assess the degree to which performance standards are met, and DOT should be required to actively seek public input regarding the adequacy of MPOs' public participation. More specific recommendations are provided below:

- In addition to ozone and carbon monoxide, MPOs' boundaries should be expanded to

encompass particulate matter (PM) non-attainment areas. To assure continued effective management and coordination of air quality and transportation programs, MPO boundaries established by the CO, ozone and PM non-attainment areas should remain in place once these areas reach maintenance status. PM alone accounted for 43-60 million respiratory restricted days in 1991, and an estimated 33,300 premature deaths-- a figure comparable to accident related deaths in the same year. Expanding MPO boundaries to encompass the entirety of the particulate matter non-attainment area ensures that the planning area matches the scope of the problem providing for a more coordinated approach to controlling PM. This rationale prevailed for ozone and carbon monoxide, and should here as well. In accordance with this approach, it should be made explicit within ISTEA that PM areas are also eligible for CMAQ funds. Once attainment has been reached and area is designated a "maintenance area," the maintenance area should continue to define the MPO's boundaries. This will ensure continued coordination of transportation programs and air quality goals. Specific language changes are provided at the end of this paper.

- MPOs should be empowered to carry out their responsibilities by ensuring that they have funding for their metropolitan area's transportation needs. A recent study of State spending showed that despite direct monetary allocation within the Surface Transportation Program (STP), urban areas received only 46% of funds for road projects in FY95, even though they represent 64% of the population. It is the MPOs that create the transportation plan for their area, and the MPOs that make conformity determinations. MPOs are also key players in the development of air quality attainment SIPs. Because MPOs have these responsibilities and a higher share of the population they should have the funding available to meet these needs. To achieve this, a greater share of the STP should be set aside for urban areas and funding for transit should be increased. Some proposals currently in play would reduce urbanized states apportionment of ISTEA funds. Though this may put some states allocation better in line with its contribution to the trust fund, its net effect will be to increase urbanized states' net federal donor status and increase more rural states' net surplus with the federal government.
- Reauthorization can be a means to improve MPO representation. Direct election of all or some portion of an MPO allow citizens to provide clear guidance to officials on their regional goals, priorities and desires as they relate to transportation decisions. At minimum, MPOs can be more reflective of the diversity of citizen goals by requiring a greater diversity of interests in MPOs themselves. Currently, MPOs are appointed by the Governor. Direct elections or representation requirements would provide more local control and responsiveness to local concerns.

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Voluntary Parking Cash Out

Summary

The federal tax code subsidizes free, employer-provided parking spaces for commuters. This subsidy amounts to \$19 billion per year. Cash Out would allow employers to offer employees taxable cash salary instead of free parking, without negative tax consequences. This tax code change would allow any employer to offer Parking Cash Out without incurring negative tax penalties, and any state to enact and enforce laws on Cash Out without creating tax problems for its residents, but would not require any action on the part of employers, employees, or states. Federal tax revenue from Voluntary Cash Out would equal about \$1.6 billion over six years.

Background

Internal Revenue Code (IRC) section 132(f) exempts up to \$165 per month in parking, and up to \$65 per month in transit or commercial vanpool services from federal and most state income and payroll taxes, provided the employer offers only these benefits and nothing else, such as taxable cash salary, in lieu of the parking space. In other words, to qualify for the exemption, parking must be provided by the employer, take-it-or-leave-it, with no other options, including taxable options. If an employer offers to trade taxable cash income for any parking space, the employer loses the exemption for all parking spaces. Not surprisingly, 95% of cars driven to work park in free, employer-provided-parking.

Voluntary Parking Cash Out would change the federal tax code to eliminate the negative tax consequences of offering employees taxable cash in exchange for their free, employer-provided space.

Tax Revenue

By trading in their spaces, employees (particularly those in urban and surrounding areas), can significantly increase their take-home pay. A commuter who trades in a parking space worth \$100 per month increases her annual take-home income by about \$780 annually, and generates about \$440 in tax revenue. If every commuter who currently receives free parking were offered the option of taxable cash instead, federal tax revenue would increase by \$1.1 to \$1.7 billion annually. Not all employers will choose to offer cash out to their employees, however. Counting participation by only those employers who can reasonably be expected to voluntarily offer cash out to their employees, federal tax revenue from Voluntary Cash Out would equal about \$1.6 billion over six years.

Environmental Impact and Successes

Voluntary Cash Out would decrease urban congestion and improve air quality because for every commuter who accepts Cash Out the number of cars on the road at rush hour falls by one. In areas with higher-priced parking, (and often the worst air quality and congestion problems), the effect would be most dramatic. In a review of early results at eight Southern California employers who implemented cash out, commute vehicle miles traveled (VMT) dropped by 12%, equivalent to taking one out of eight cars off the road at rush hour. The last 12% of lane capacity added to accommodate peak traffic at rush hour cost the U.S. \$26.6 billion in 1996 dollars. The nationwide reduction in VMT from Voluntary Cash Out would be 4% off the baseline in 2002. In California, Cashing out also reduced vehicle emissions by 12% and at the time of day most critical to preventing ozone formation. This reduction is equivalent to eliminating vehicle emissions from automobile commuting from January 1 to February 13, every year. Likewise, emissions of greenhouse gases that contribute to the threat of climate change were reduced by 12%. If this reduction were duplicated nationwide, the reduction in GHG emissions would achieve 20% of the target set in the President's 1993 Climate Change Action Plan.

Voluntary Parking Cash Out reduces non-point, mobile source air emissions much more effectively than other policy instruments (such as employer trip-reduction programs formerly mandated by the 1990 Clean Air Act Amendments); it does so fairly (the policy creates choices for employers and commuters rather than mandating any activity); and it does so at no cost.

Legislative Language

Enabling Voluntary Parking Cash Out requires the following two changes to the Internal Revenue Code:

- Eliminate Section 132 (f) (4), the "benefit not in lieu of compensation" clause.
- Add a phrase to Section 132 that says "IN GENERAL--No amount shall be included in the gross income of a recipient of qualified transportation fringe benefits solely because the recipient may choose among qualified transportation fringe benefits."

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TRAFFIC CALMING

Background

Traffic calming is a relatively new technique for slowing down the speed of motor vehicles. The basic premise is that traditional traffic control strategies, such as stop signs, speed limits, and enforcement, generally have not had the desired effect on speeds. Drivers tend to increase their speed to match the design limit of the road. Traffic calming involves physical modifications to the road to slow traffic, essentially reducing the 85th percentile speed to 15-20 mph.

Originally traffic calming was used in residential neighborhoods. The techniques used include the installation of speed humps, creating curvature in the road, narrowing the road at pedestrian crossings, and many other design features. It is generally desirable to install these features within a neighborhood, rather than on isolated segments. The latter approach often results in traffic diverting to adjacent streets.

Traffic calming is also beginning to be implemented in commercial and business districts. Historically traffic engineers have attempted to increase the throughput and efficiency of moving motor-vehicles through these areas, to the detriment of pedestrian activity. Slowing the traffic down can actually increase the economic potential of a commercial district by producing a safer and more attractive pedestrian environment, for example, by making it easier to cross the street.

Environmental and other Benefits

The main environmental benefit of introducing traffic calming is that it creates a more livable community and increases pedestrian activity. Studies have found that traffic calming can reduce pedestrian fatalities and injuries by 50% or more; an obvious incentive for people to walk more. The safety benefit comes not only from the reduction in speed but also from diversion of traffic away from residential neighborhoods and a shift towards more walking and bicycling. The LUTRAQ study in Portland, Oregon, quantified the benefits of a better pedestrian environment for reducing motor vehicle traffic.

Emissions benefits have not been well quantified. Reduction in vehicle miles of travel (within the neighborhood) can occur due to mode shifts. Off-setting increases may occur as other vehicles avoid short cuts previously taken through residential neighborhoods. Slower speeds may actually increase levels of some emissions, but this may also be completely off-set by fewer fast accelerations. Reductions in vehicle noise levels have been measured due to vehicles traveling at slower speeds.

Success Stories

Many communities have discovered that traffic calming is very popular amongst residents, at least when it happens on their street. Traffic engineers are clamoring for new knowledge to learn how to build traffic calmed streets demand for training courses is exceeding capacity.

Many communities are implementing comprehensive plans that include traffic calming. For example, Sacramento, California, recently passed the Neighborhood Preservation Transportation Plan to implement traffic calming in old neighborhoods near downtown Sacramento. Montgomery County, Maryland, cannot keep pace with the demand for traffic calming measures, such as speed hump installation, and does not have the funding available to meet that demand. Advocates in New York City are making progress in getting City approval of a traffic calming plan for New York City. St. Paul, Minnesota, instituted a variety of measures in their downtown area to slow the speed of motor vehicles. The result has been an increase in pedestrian activity and economic activity in the downtown area.

ISTEA Recommendations

Traffic calming can provide environmental benefits by reducing motor vehicle traffic and emissions. It encourages more pedestrian activity and is a key element of many livable communities. The safety benefits are very clear and have been well documented.

ISTEA provides funding for safety improvements. In addition, enhancements money could, in theory, be used for traffic calming projects. However, most traffic calming is built on residential roads that are not federal aid roads, and hence funding could not be flexed to them from other funding categories. Funding from any source for pedestrian safety has been minimal compared to spending on other, smaller, safety risks. For example, about 1000 people a year die at railroad crossings, justifying removal of at-grade crossings as a high priority for safety money. However, about 6000 pedestrians are killed each year and the level of funding for reducing these fatalities has been minimal in comparison. Funding directed at traffic calming projects for residential and commercial areas could potentially reduce the pedestrian accident rate.

If the goal, then, is increased spending on traffic calming, how can ISTEA be changed to help achieve that goal? The Transportation Enhancements Activities program can currently be used as a source of funding for some traffic calming projects. However, insignificant funds have been allocated for this type of project. In order to increase expenditures on traffic calming, EPA proposes that either

- A dedicated set-aside for traffic calming projects be created, either as a specific enhancements category or as a stand-alone category with at least 1% of STP funding; or,
- this be mandated as a high priority for the funding of safety projects and receive a similar amount of funding through safety set-asides

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Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) have been promoted as being the solution to many environmental problems associated with transportation. Substantial funding has been provided to research these technologies in the current ISTEA and ITS proponents are advocating a dedicated set-aside to implement ITS. ITS consists of a broad range of information related technologies ranging from providing traffic information to motorists to the Automated Highway System.

ITS could potentially be utilized to achieve environmental benefit based upon which technologies are actually implemented ("deployed" in the jargon of the defense industry). For example, ITS aimed at making transit systems more efficient such as global tracking systems tied into information systems that inform transit customers of vehicle locations can not only reduce transit costs, but increase the reliability of the system and predictability for the user. Both could increase the patronage of transit systems and reduce VMT. Electronic tolling and road pricing technology (such as deployed on SR 91 in Southern California) can allow the implementation of pricing strategies without causing congestion at toll booths. While these technologies potentially could benefit the environment, their "deployment" has been sparse compared to other ITS technologies.

Most other ITS technologies have been aimed at making the movement of motor vehicles more efficient. Essentially increasing the capacity of the system. While this may be preferable to physical construction, such as adding additional traffic lanes, it will still induce more traffic and decrease the livability of neighborhoods. Some of these type of projects have been the primary ITS technologies that have been deployed. Examples include:

Traffic signalization projects are aimed at coordinating traffic signals to optimize the throughput of motor-vehicles. This usually involves increasing their speed. Short term environmental benefits may occur due to decreased stop and go traffic, however, this is a relatively minor component of total emissions and may easily be off-set by increased traffic or system effects that simply relocate the stop and go traffic. In addition, signalization coordination geared towards increasing throughput tend to make streets less friendly to the pedestrian.

Traffic management centers are intended to control traffic flows from a centralized center including active adjustment of signals, dispatch of tow trucks and emergency services to clear accidents and breakdowns, and coordination of information on current traffic conditions through changeable message signs or other information outlets. Utilization of that information by motorists is likely to induce more travel since

it effectively reduces the uncertainty cost of travel. In some cases it may result in less travel during unexpected congested conditions. In other cases it may re-route traffic either increasing or decreasing VMT. Environmental impacts are not clear-cut, but increasing system efficiency is likely to induce additional travel.

Automated Highway Systems (AHS) are the ultimate high-tech outcome of ITS. While the ultimate vision of how this will work is unclear, it basically involves adding more vehicles onto existing roadways by having the vehicle and highway control vehicle behavior. Some research is geared towards grouping vehicles into high-speed platoons, while other research is examining systems to keep vehicles in lanes or set distances between vehicles. These technologies would increase the capacity of the roads and speed of vehicles with environmentally damaging consequences for community livability, land use, and emissions. Large amounts of research dollars have been devoted to the AHS.

ISTEA Recommendations

1. An explicit statement that all ITS projects need to be considered like any other transportation project in planning and conformity analysis. This is already the case, but we may need to be aware of efforts to over ride this. For example, set-asides dedicated to implementing ITS technologies could be a strong incentive for MPO's and others to exclude ITS from the full planning process.
2. A shift in the research funding of ITS away from the AHS towards those options that are beneficial for the environment, such as increasing transit efficiency and pricing options. In addition, funding for deployment should be geared towards those options that do not focus on increasing vehicle throughput.

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Privatization of the Interstate Network

Background

Government involvement in the funding of roads and freeways is a relatively recent phenomenon. Private entrepreneurs built the original turnpikes in this country. While many of these facilities did not succeed due to toll avoidance, this was primarily because the technology of that time did not include controlled access to the facility. Controlled access highways are the norm today and even government-run turnpikes are capable of enforcing tolls on users. The reasons for maintaining the interstate system under government operation and control should be reexamined, especially since private ownership would presumably result in more efficient operation and more innovation that would provide increased choice to users.

Environmental Benefits

The primary environmental benefit of Interstate privatization is that it is a mechanism to internalize the costs of highway construction and maintenance. This means that users would pay a toll to use the facility that covers capital and maintenance costs, the former reflected through the market rate at which the facility is purchased. Possible impacts would be a reduction in vehicle miles of travel, a shifting of freight to rail, and lower emissions of carbon and criteria air pollutants.

Success Stories and Possible Impacts

Several recent experiments have introduced the concept of private ownership of roads in this country. These were designed to leverage private funding for the construction of new facilities, rather than converting existing facilities to entrepreneurial ownership. The two examples are SR 91 in Orange County, California and the Dulles Greenway in Northern Virginia. The former has proven to be very successful, partly because of the introduction of congestion pricing and electronic tolling. Use has exceeded owners' demand projections. The Dulles Greenway, however, has not been as successful. Demand forecasts were wildly optimistic and the facility is facing the prospect of bankruptcy. The owners are considering introducing congestion pricing to more fully capture the marginal benefits of those who are using the facility. In any case, if the facility fails, this is not cause for alarm but is merely how the private sector works and provides a valuable learning experience for future efforts.

While these two experiments are innovative, they are of dubious environmental benefit. Both involved capacity expansion. Obviously if this expansion were to occur anyhow it is better for the facilities to be tolled than to be free. It is uncertain what the long run land use implications of these facilities will be. Privatization of existing facilities,

however, is an excellent method for internalizing many of the costs of these facilities while introducing the potential for innovation. Currently, gasoline taxes do not cover all of the costs of these type of facilities. For VMT reduction, charging tolls is economically more efficient than charging gasoline taxes anyway.

How can privatization work? First, government will still maintain some sort of role, probably through price regulation at the state level. This should be designed to allow innovations such as congestion pricing to be implemented. Initial selection of corridors should be designed to ensure competition between various facilities. For example, a parallel rail facility could serve as competition for freight traffic. Regulation could be designed to encourage the entrepreneur to experiment with transit. SR 91 is required to allow HOV 3 to use the facility for free. One can imagine an entrepreneur coordinating demand responsive transit services, using the latest ITS technologies, within the corridor the facility is serving.

Why might this work politically? This is an open question. The success of the SR 91 experiment is encouraging. People seem to be more willing to pay tolls (i.e., taxes) to private entrepreneurs than to government. Presumably the private sector will use the money more efficiently and will have an incentive to maintain levels of service on their facility at the lowest cost. Another consideration is that selling, leasing, or franchising the interstates to the private sector is a source of income for the government. This could be dedicated to deficit and/or tax reduction. There would probably need to be some formula for allocating the profit between the federal and state level, perhaps based on the historical investment each has made in the facility. This bidding process should obviously be competitive to obtain the highest rate of return for the governments involved.

ISTEA Recommendations

ISTEA reauthorization provides a mechanism for experimenting with these concepts. The states may need an incentive to experiment with privatization. For example, the revenue generated by selling the facilities could be based on a formula that rewards the states (that is, they end up making more money than what they put in historically, or they receive SIP credits based on estimated VMT reductions). ISTEA could propose that a number of pilot projects be considered. These could be required to meet some criteria, such as the existence of a competing facility, likelihood that the private sector can succeed, etc. In any case, these details can be considered in guidance documents after passage of NexTea that would authorize a limited number of pilot projects.

EPA Contact: Bob Noland (202) 260-2418

Cool Communities

Background

Urban areas in the United States are characterized by dark surfaces and less vegetation than surrounding suburban and rural areas. Rooftops, roads, and parking lots compose a significant portion of this surface area. In parts of Columbus, Ohio for instance, parking lots alone constitute as much as 32% of developed land. The concentration of dark and impervious areas that dominate urban environments have impacts on cities' temperatures, and in turn their energy consumption, stormwater runoff, and smog formation.

Environmental Impact

The Heat Island Project at Lawrence Berkley Laboratory estimates that "Collectively, the dark surfaces and reduced vegetation raise the air temperature in a typical city about 2.5 degrees Celsius on a clear summer afternoon." This rise in temperature is responsible for approximately 5 to 10 percent of peak urban electrical demand. Power generation for this peak demand is expensive, contributes to degradation of air quality and contributes to global warming. Higher temperatures also accelerate the formation of smog. The total population living in counties with air quality levels which exceed at least one of the NAAQS criteria was 59.1 million. The probability of smog increases 6% with each degree Celsius increase in maximum daily temperature.

In addition to contributing to air pollution, the combination of impervious surfaces and reduced vegetative cover increases stormwater runoff contributing to combined sewer overflows and pollution of urban waterways. The Natural Resources Defense Council estimates that there are 50 to 80 overflow events per year for each of the 1,100 communities with combined sewer systems resulting in an estimated 1,200 billion gallons of untreated sewage, industrial wastes and urban runoff in waterways annually.

Modeling Predicts Gains

The Department of Energy's Cool Communities program has investigated the benefits associated tree planting and increasing the reflectivity of city surfaces as a strategy for addressing these problems. Early results offer a promising picture from a financial and environmental perspective. Modeling the done on the city of Los Angeles indicates that changing rooftop and pavement color in combination with strategic shade tree placement summer time temperature reductions of 2 to 4 degrees Celsius were possible. The predicted changes to surface color included changing visible rooftops from dark colors to light beige, making flat roofs bright white, and changing asphalt to the color of weathered concrete.

Benefits of decreased temperature and increased tree cover were also modeled. Reductions in peak power generation in Los Angeles were estimated to be .6 to 1.2 GW resulting in cost savings of 1 to 2 hundred thousand dollars per hour. Reductions in temperature also reduce smog formation. However, urban heat islands also increase the volume of air in which smog is dispersed through

increased convection. Reducing the temperature reduces this mixing. As a result there were 20% reductions in peak smog in some parts of the city and 10% increases in others. The net predicted population-weighted result was roughly a 10%-20% reduction in smog, the equivalent of removing 10 million motor vehicles from the LA Basin-- all the motor vehicles in the basin. Extrapolating to determine greenhouse impacts of a nation-wide cool communities campaign the Heat Island Project predicts, upon full implementation, annual savings of \$10 billion dollars and annual carbon emission prevention of 27 million metric tons.

Modeling and simulation in Atlanta suggest shade trees have also have a positive affect on stormwater runoff. A site representative of the city's residential tree cover shows that tree canopy in Atlanta currently reduces stormwater flows by 35%. These reductions result from increased water diversion along leaf and stem flow and positive impacts on soil infiltration rates.

ISTEA Recommendations

Cool Communities strategies may in some cases be a powerful tool to mitigate some of the environmental problems associated with transportation. Transportation is also an appropriate lever for addressing many heat-island problems because the transportation sector has influence over choice of road surfacing material, its color, and vegetation choices in and along rights of way. However, like the initial reviewers of this paper, many are likely to believe these results to be inflated or unrealistic. Even if the results are off by half, or even by an order of magnitude this strategy appears to be worth exploring, at least on a pilot basis. A pilot could take place on a neighborhood scale and actual results could then be measured. Without such a pilot we will not know the efficacy of this strategy. Pursuit of a Cool Communities Pilot under ISTEA could take a number of forms. Some possibilities are listed below.

- Monetary set aside to pilot cool communities strategies, measure outcomes and create protocols for use as a creditable strategy under State Implementation Plans. This could be included as a research item under Title VI, part A.
- Requirements or partial waiver of match requirements under STP for use of a certain percentage of cool colors on new and resurfaced paved areas.
- Combine roadside tree-planting (with accompanying dark surface shade benefits) with traffic calming strategies to overcome traffic safety concerns.
- Mitigate construction-related tree destruction with tree planting in urban areas.
- If pilots are successful, use data to create protocols for use of Cool Communities as a creditable strategy under State Implementation Plans.

Any pilot of the Cool Communities strategy should ensure that the climatic conditions are appropriate for this strategy.

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EPA ISTEA Recommendations



Briefing for Mary Nichols
and David Gardiner
December 17, 1996

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Will we implement the President's vision for America?

ISTEA is the strongest tool the Administration has to implement its vision.

The Administration's goal	Our plan	Their plan
<i>Economically and culturally strong regions.</i>	ISTEA empowers regions, and their MPOs, to plan and invest for the region's benefit. ◆ Empowers MPOs with money, with planning authority, and with specialized tools, tailored to each region's needs. ◆ Helps MPOs with performance incentive funds, without forcing. ◆ Leverages existing development and investment by supporting community efforts to redevelop brownfields.	Return power to the state highway departments, which are not constituted to maximize regional health. Even under ISTEA, state highway departments spend disproportionate amounts in rural areas, <i>not</i> where the majority of the population and the need is. As regions fail to get the flexible, choice-rich transportation networks they need to prosper, they become less connected, less vibrant, less competitive.
<i>Communities participate in making decisions about those regions.</i>	Stronger ISTEA community participation provisions. The community has performance data with which to judge how their dollars are being spent. Efficient ISTEA investments respond to diverse citizen and business needs, spurring efficiency, growth, and satisfaction.	Weaker community participation. Highway departments respond only to the few people who understand an essentially closed process. As transportation providers fail to hear about, and respond to, changing needs, congestion increases, economic waste increases. Development leaves town. Citizens become disconnected, unhappy.
<i>A healthy population and environment.</i>	ISTEA responds to the damage that transportation can cause. It expands resources to respond to new air standards. ISTEA offers extra incentives and pilot programs to help regions do the progressive planning necessary to minimize health harms. Empowered regions implement bold, sustainable plans for growth.	ISTEA sticks to narrow transportation planning. Transportation does not <i>interfere</i> with other national and local goals, but it also does not <i>leverage</i> transportation funds to help achieve other goals. Regions don't have the resources or planning freedom they need; human health and the environment worsen.

EPA's ISTEA Reauthorizaton Principles

- ▶ Focus on Long-Term Sustainable Benefits
 - ▶ Maintain State and MPO Flexibility
 - ▶ Internalize or Mitigate Transportation Externalities
 - ▶ Encourage environmentally sound projects with incentives and set-asides
 - ▶ Improve Accountability
-



Congestion Mitigation and Air Quality Improvement

- ☆ Expand CMAQ eligibility and funds to respond to PM and ozone regulations
- ▶ Provide CMAQ funds for attainment and maintenance areas
- ▶ Give greater priority to, and expand eligibility for, CMAQ projects that produce long-term sustainable benefits
- ▶ Deemphasize use of CMAQ funds for traditional transit and highway projects



Energy and Freight Efficiency

☆ Encourage Energy Efficiency

- Modify NHS and STP allocation formula to reward states that reduce per capita transportation fuel consumption

► Expand Funding for Freight Efficiency

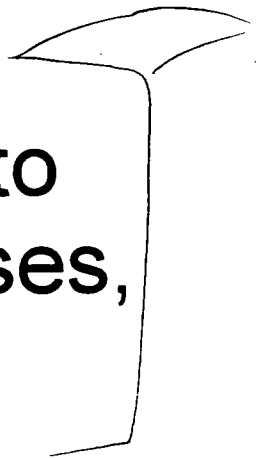
- Create a pilot fund from STP, NHS, and planning funds to include freight environmental and efficiency projects





Set-Aside for "Clean" Heavy Duty Vehicles

- ▶ New NAAQS will require increased controls on diesel fueled heavy duty vehicles
- ▶ State and local governments need help to purchase "clean" vehicles to replace buses, garbage trucks, and road construction equipment
- ▶ Create set-aside to help state and local governments purchase cleaner vehicles



Enhancements Program

☆ Create an Historic Wetland Restoration Pilot Program

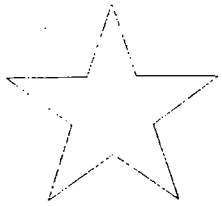
- Program would be modeled on USDA and COE restoration programs
- Goal would be to restore 50,000 to 150,000 acres of wetlands and riparian habitat



Enhancements Program

- ▶ Target enhancement funds for greater benefits including
 - stormwater management ✓
 - dredging of port channels ✓
 - nonpoint source pollution
 - drinking water protection
 - ▶ Integrate funding decisions with State and Federal management plans, e.g., State Coastal Management Plans
- 





Planning and Performance Standards and Fund

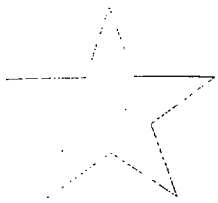
- ☆ Create a pilot incentive fund to reward States and MPOs that use Planning and Performance Standards
 - Responds to GPRA
 - Informs communities, establishes goals, tracks progress
 - Existing performance-management systems have not worked well
 - Standards could be set by States and MPOs
-



Planning and Performance Standards Cont'd

- ▶ DOT, EPA, DOE, and HUD would establish "factors" for State and MPO consideration:
 - public participation
 - accessibility
 - energy consumption
 - number of vehicle trips
 - acres of land developed
- ▶ Implementation could be through guidance, regulations, or Federally mandated goals





MPO Structure and Funding

- ▶ Increase the percentage set-aside in the STP for metropolitan areas, and/or increase total STP funds
- ▶ Require, and help pay for, elections for some or all MPO members
- ▶ Adjust MPO boundaries to reflect PM non-attainment areas, as well as ozone and CO



LUTRAQ Pilots

- ▶ Fund 10 pilot LUTRAQ projects to illustrate transportation alternatives at the local level, foster adoption of improved transportation modeling, and provide insights into the effectiveness of new approaches to transportation
- ▶ Dedicate funding to developing better modeling tools for rural areas, towns and small and medium size cities. These models should consider land use and pricing alternatives and include pedestrian, bicycle and transit modes in addition to automobile travel.





Brownfields

- ▶ Brownfields are abandoned or idled property where redevelopment is complicated by threat of environmental contamination
- ▶ Brownfields redevelopment frequently requires transportation related improvements
- ▶ Brownfields redevelopment can also:
 - achieve (or maintain) CAA attainment
 - revitalize neighborhoods
 - address transportation needs more cost-effectively



Brownfields Recommendations

- Insert a policy statement affirming Brownfields link to transportation
- Include Brownfields in the MPO and State planning processes
- Clarify that brownfields are eligible for Enhancements, STP, NHS, and State Infrastructure Bank funds
- Increase cap on Treasury Industrial Development Bond Authority and use for Brownfields
- ★ Set aside or earmark \$100 million from STP for brownfields-related transportation projects.
- ★ Allow Federal transportation funds to be used for local road projects for brownfields-related transportation projects.
- ★ Waive local match requirements for brownfields-related transportation projects.
- ★ Apply Brownfield recommendations to infill opportunities



Voluntary Parking Cashout

- ▶ Tax code provides \$19 billion subsidy for commuter parking
- ▶ Modify IRC to allow employers to offer employees taxable cash salary instead of free parking
- ▶ Increased tax revenue equals about \$1.6 billion over 6 years
- ▶ Preliminary analysis suggests VMT dropped 12% for participating CA employees



Cool Communities

- ▶ LA study suggested 10-20% reduction in smog from cool communities practices
- ▶ Create Cool Communities Research Pilot for State Implementation Plans
- ▶ Waive STP match requirements to promote use of cool colors on new and resurfaced paved areas





Deregulate Transit Market

- ▶ In deregulated transit markets entrepreneurs can provide alternative to cars
- ▶ Recommendations
 - Eliminate Federal restrictions on open transit markets
 - Make receipt of Federal funds dependent on submission of plan to open transit markets



Alternatives Analysis for Major Investment Studies

- ▶ Most MISs do not consider important, cost-effective environmental options
- ▶ MISs should be required to assess
 - Pricing option, like tolling, which can reduce demand and internalize environmental costs
 - land use changes, which can reduce travel requirements and revitalize neighborhoods



NEPA and MIS Coordination

- ▶ Some States and MPOs have complained that the NEPA and MIS processes are duplicative
- ▶ DOT and EPA should work to enhance guidance on joint NEPA/MIS documents
- ▶ Legislative changes are unnecessary
- ☆ OMB has suggested that ISTEA funds could be use to dedicate EPA staff to participate in MIS review



EPA's Recommendations Would:

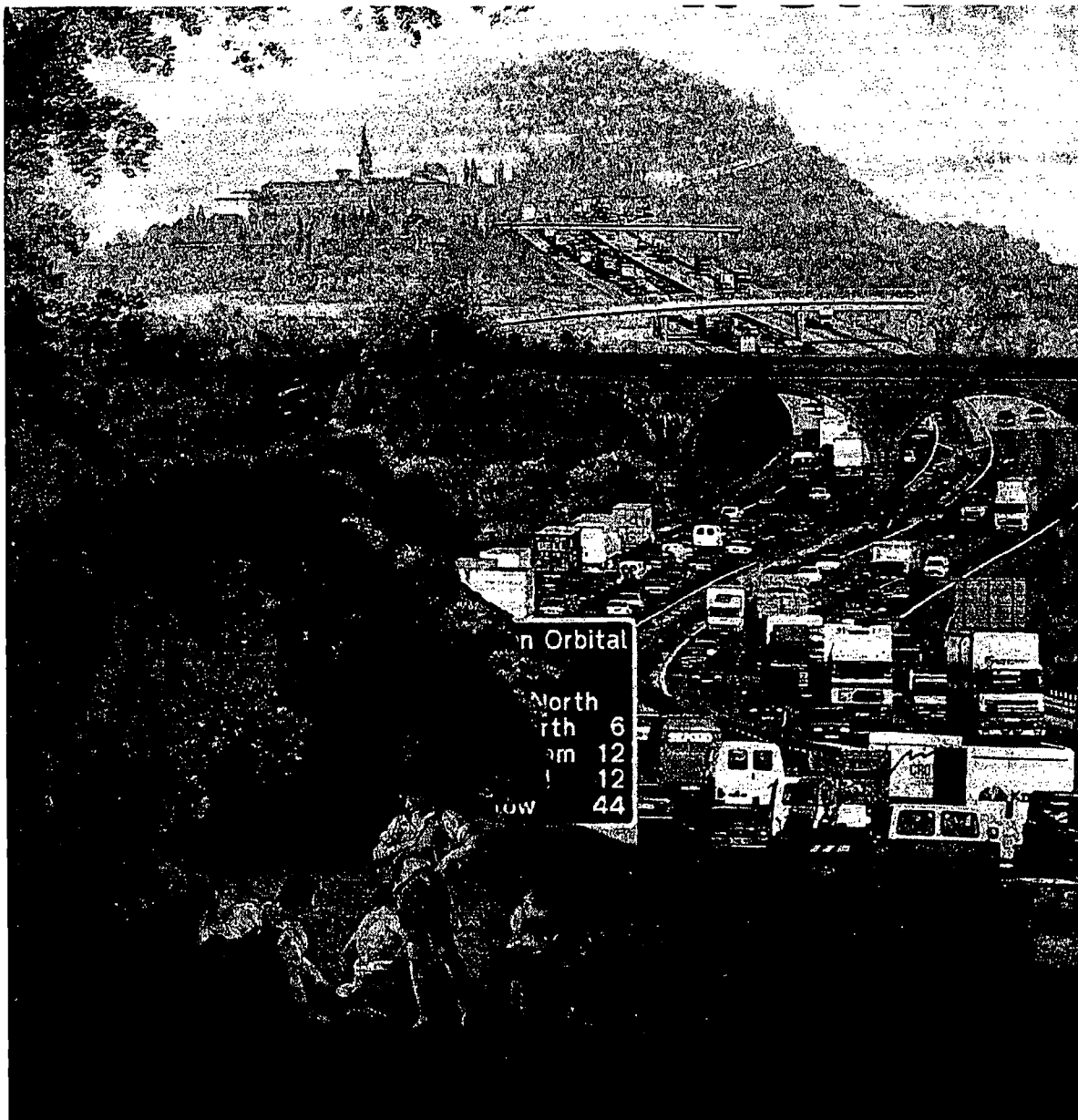
- ▶ Produce more measurable and sustainable environmental benefits
- ▶ Help States, MPOs and local governments comply with Federal Mandates
- ▶ help internalize and mitigate transportation's environmental externalities



ISTEA

IS PROTECTING THE ENVIRONMENT

TODAY



**ISTEA success stories which support EPA's ISTEA
reauthorization message**

By the OPPE Transportation Group for David Gardiner, May 30, 1996



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Moving in the Right Direction: ISTEA Success Stories



I. ISTEA protects the environment directly



A. Under ISTEA, planning protects the environment

1. In the states

Maine's Sensible Transportation Policy - ISTEA makes a policy of including environmental concerns in transportation planning, a policy in which the state of Maine is exemplary. Maine has adopted a holistic approach to transportation investment. Maine established procedures that stress alternative modes, maintenance of existing facilities, and broad-based public participation. In addition to addressing mobility, long-term transportation plans focus on energy use, environmental preservation and social equity.

Maine's Sensible Transportation Policy requires that Maine's investments in transportation infrastructure *seek to minimize the environmental and energy impacts of each proposed project*, and that needs of all of the states residents be considered equally. *Any proposal requiring an environmental impact statement such as the construction of a new highway or the widening of an existing highway must give preference to alternative modes, transportation demand management, no-build option, and other substitutes to highway expansion.*

Is already changing investment patterns

This unique dedication to transportation alternatives is already producing significant results. The 1994-95 Transportation Improvement Plan for Portland, Maine, for example designated half of the regions' capital investment to non-highway projects. Funds that would traditionally have been spent on new roads will fund bikeways, pedestrian enhancements and transit service improvements.

Is the product of inclusive planning

Maine's exemplary planning process is truly a product of the states citizenry. Following the public referendum which initiated the Sensible Transportation Policy in the wake of ISTEA, contributions from interest groups, transportation professionals, and the general public were all crucial to the formulation of the state's new planning guidelines. Environmentalists, bicycle and rail advocates, paving contractors, developers, the disabled, the business community and numerous state and local transportation agencies and government bodies collaborated on the Transportation Policy Advisory Committee. By giving a voice to all interested parties, every group found something to gain by implementing the Sensible Transportation Policy.

Additional examples:

- ◆ **Oregon's Transportation Planning Rule:** Requires the state's transportation planning to contribute to attainment of the state's benchmark goals, which include a decrease in per-capita vehicle miles traveled.
- ◆ **Colorado's mule Deer Crossings** - Colorado has constructed a series of underpasses on Interstate 70 especially for mule deer. The underpasses typically consist of an enlarged pipe culvert which is capable of accommodating large animals such as deer. Mitigation of wildlife hazards are eligible for STP funds if the effort is part of a highway improvement project. These mitigation efforts can also be funded by the Transportation Enhancements program if the project is not directly related to a highway project.

Construction of special passageways for transitory and migratory land animals is an important form of highway mitigation. Many states with large deer populations have built fences and other barriers

Moving in the Right Direction: ISTE A Success Stories



along highways to attempt to prohibit deer from crossing roadways. Inevitably, however, animals find a means to circumvent the fencing and find a path across the highway. In order to mitigate conflicts between roadways and the migratory patterns of wildlife, it may be necessary to create a special route for animals to go over or under the highway.

Designing special structures to accommodate animal movement typically requires extensive study to determine animal movements and the likelihood that animals would utilize the structures. These preliminary studies may be eligible for highway funds as a necessary part of mitigation efforts.

- ◆ *Protecting Florida's Panthers* - The state of Florida encountered numerous environmental concerns when it developed plans to upgrade a major state highway into Interstate 75. Of primary concern was the habitat of the Florida panther, an endangered species native to the region surrounding the highway alignment. Sections of the highway were elevated to allow the panthers to maintain their migratory patterns with minimum disturbance. In all, 24 overpasses, costing an average of \$750,000 were built along a 40 mile stretch of the highway.

2. In direct federal actions

Preservation of Alaskan Salmon Habitat - In September of 1995, the Federal Lands Highway Division (FLHD) completed reconstruction of the 7.3 mile Exit Glacier Road near Seward, Alaska. The previous roadway alignment was a dangerous, single lane path which was repeatedly washed away by glacier-fed rivers in the region. In order to transform the Exit Glacier Road into a safe and reliable two-lane passage, it was necessary to realign the road through some prime wetlands and riparian zones which were very important to the spawning and rearing habitats of migratory fish.

The FLHD, in collaboration with local and state officials, as well as the National Park Service and US Forest Service, spent approximately \$150,000 of ISTE A STP funds to implement extensive mitigation efforts to preserve and improve the natural habitat along the Exit Glacier Road. Special pipe culverts were installed to enable the riverbed to cross under the roadway. Normal culverts have a slick bottom which increases the river current and prohibits fish from making their way upstream. The Exit Glacier Road culverts were partially filled in with rocks and soil to stabilize the current. A series of twelve ponds used by the salmon for spawning and rearing were also created. Heavy rock rip-rap and large root wads were also put in place create natural resting sites in the heavy river current to create a natural "ladder" for fish climbing upstream to spawn.

Additional examples of environmental protections in federal transportation planning include:

- ◆ *Erosion Control Guidelines* - ISTE A directs the U.S. DOT to develop national erosion control guidelines consistent with the Federal Water Pollution Control Act for construction projects.



B. ISTEA meets needs without highways

Portland LUTRAQ - Like most of the nation's metropolitan areas, Portland, Oregon has experienced suburban growth and increased traffic congestion in recent decades; unlike most of the nation's metropolitan area, Portland has resisted the temptation to try to build their way out congestion. Instead, Portland, in partnership with 1,000 Friends of Oregon, has devised LUTRAQ, a demonstration project to develop methodologies for creating and evaluating the transportation and air quality impacts alternative land use patterns. Using a proposed bypass freeway around the Portland, Oregon metropolitan region as a case study, this project identifies alternative land use development patterns that reduce travel demand and develops modeling procedures that forecast the travel behavior associated with alternative land use patterns. The initial results of the study indicate that by introducing alternative land use patterns and increasing travel options, could potentially increase household density from 3 to 15 households per acre. Furthermore, VMT per household may be reduced by as much as 10 percent.

Additional examples:

- ◆ *Madison, Wisconsin levels the project playing field* - The Madison, Wisconsin MPO developed a transportation investment evaluation system which treats highways and transit fairly using the planning criteria identified in ISTEA. The result of the new scoring system has been a shift in the use of STP funds away from highways; to transit, bicycle and pedestrian projects. The impact of the new approach to planning is shown by Madison's recent selection as one of the most bicycle-friendly communities in the nation.
- ◆ *Cleveland's long-term Vision* - The MPO in Cleveland developed an innovative project ranking system that helps decision-makers prioritize projects on how well they contribute to the long-term well-being and competitiveness of the region.
- ◆ *Albany's New Visions* - Through the "New Visions" initiative, the Albany, NY MPO has started calculating and using total costs of transportation projects including traffic jams, environmental factors, and larger economic impacts. This comprehensive accounting is almost unprecedented, and includes costs and benefits traditionally ignored by highway planners and engineers.
- ◆ *Minnesota moves highways to the back burner*- Using ISTEA's requirement of fiscal constraint and evaluation of alternatives, the Neighborhood Transportation Network (NTN) in Minnesota was successful in reclassifying controversial highway projects as "projects not yet fully studied."
- ◆ *Bridge Preservation in Vermont*: Most bridges were built after a 1927 flood, and are now reaching the end of their life. Rather than replacing them all with a standard new AASHTO bridge, the state has used ISTEA's new flexibility and funding provisions to rehabilitate or replace historic bridges on a case-by-by-case basis. Preserved: not only the bridges, but the money, land, and houses that the wider and more expensive AASHTO bridges would have required.
- ◆ *Montana's rural transit alternative to highways* - In Montana, rural residents opposed DOT's plans to widen US 93 from two lanes to five. Residents organized a rural transportation management association for car and van pooling—and have begun research public transportation options. Together, these measures could save millions in construction costs, far reduce environmental impact, and better meet the needs of rural residents.

Moving in the Right Direction: ISTEA Success Stories



- ◆ *Beltway Rejected I* - Kansas City's MPO reviewed plans for a beltway and asked residents to participate in the process. The result was a decision to scrap plans for the big-budget new highway.
- ◆ *Beltway Rejected II* - In Atlanta, the Atlanta Regional Commission studied an outer beltway proposal supported both by FHWA and the state DOT, and found that the outer loop would not reduce congestion. All but one segment of the beltway have now been canceled.



C. ISTEA involves EPA and its counterparts in planning

Minnesota DOT- The Minnesota Department of Transportation developed the Process for Transportation Investment Decisions (PTID) as one means of responding to ISTEA's mandate for inclusive planning. The PTID brings agencies together at the state and local level to promote a common set of priorities and shared decision-making.

Through the PTID, transportation decisions are integrated with other state and regional investment decisions. *Specifically, the PTID involves agencies charged with environmental protection and energy use in transportation planning for all modes.* Elected officials are also included in the PTID.

The PTID has already proven itself useful in many ways. Although the process was originally conceived as a long-term investment, the concept has already produced significant short-term benefits. For example, when the Minnesota DOT was charged with establishing a Transportation Enhancements program and developing a proposed list of roadways for the National Highway System, the working relationships established by the PTID enabled the state to achieve consensus on these potentially cumbersome issues in a relatively short period of time. The successful partnerships between state and regional agencies, including public transit agencies and elected officials shows that a more inclusive process can also be a more efficient process.

Additional examples of successful inter-agency coordination include:

1. State

- ◆ *Florida* - Florida provides a good example of interagency coordination. FHWA, FTA, EPA and the state agencies have all worked together to provide quick response to eligibility issues and project approval.

2. Federal

- ◆ *CMAQ Project Selection* - ISTEA requires that the U.S. EPA perform an advisory role in the review of CMAQ projects selected within each state.
- ◆ *Coordinated federal review* - During the CMAQ Program Review, mandated by ISTEA, it was found that the federal regional offices of FHWA and EPA have streamlined their project review process in order to move the selection process quickly.



II. ISTEA protects the environment indirectly



A. ISTE A directs money and power to MPOs, which tend to make more environmentally-sensitive decisions

ISTEA did not prescribe the process by which agencies would coordinate to select transportation projects. This flexibility has allowed states to address coordination needs and develop decision-making processes very differently. In the spirit of ISTE A, some states have created decentralized processes in which the state has ceded some aspects of its traditional control to MPOs and local governments.

Open Planning Process - In Illinois, the MPO in the Chicago area—Chicago Area Transportation Study (CATS)—has also been very successful in creating an open planning process in transportation planning. Representatives from the state DOT, state environmental protection agency, the MPO, local governments, and interest groups tend to agree that the MPO process has been very effective and that the process is open and that regional issues have been addressed. It was noted that the MPO process in Chicago was strong even before ISTE A came into effect, but ISTE A (and in particular the CMAQ program) has further enhanced the cooperative process—bringing parties together on common issues involving transportation and air quality.¹

Bottom-up Planning - California and Washington state have created well defined “bottom-up” approaches to the selection of ISTE A’s enhancement funds. Selection criteria is set by the state and MPOs and corresponding agencies in non-urbanized areas evaluate proposed projects in their jurisdiction and send a prioritized list to the state. Although in both states, primary decision-making authority remains at the state level, the states have largely honored the recommendations by the MPOs.

Additional examples of successful transportation decision-making include:

- ◆ *MPO-directed Enhancements* - Alaska, Iowa, North Dakota and South Carolina all avoid problems with MPO integration by suballocating enhancement funds directly to the MPOs. The MPOs are responsible for selecting projects within their jurisdictions and communicating their selections to the state.
- ◆ *Chicago’s Green Line* - Following a decision by the Chicago Transit Administration (CTA) to close a elevated rail line, currently known as the Green Line, that is of vital importance to many low-income neighborhoods, a coalition of community activists banded the affected residents together to save their transit access. The coalition persuaded CTA to not only retain the rail line, but also to infuse over \$300 million to upgrade and renovate the rail line. The coalition also produced a transit-oriented design the Green Line corridor based on the communities design preferences.
- ◆ *Beltway Rejected* - Kansas City’s MPO reviewed plans for a beltway and asked residents to participate in the process. The result was a decision to scrap plans for the big-budget new highway.
- ◆ *Albany’s New Visions* - Through the “New Visions” initiative, the Albany, NY MPO has started calculating and using total costs of transportation projects including traffic jams, environmental factors, and larger economic impacts. This comprehensive account is almost unprecedented, and includes costs and benefits traditionally ignored by highway planners and engineers.

¹ Information on Illinois’ decision-making process was obtained from the CMAQ Program Review conducted by FHWA, FTA, and EPA.

Moving in the Right Direction: ISTEA Success Stories



- ◆ *Florida* - Florida's state DOT has developed a close working relationship with the MPOs, air quality agencies, and the public by involving these parties in making decisions about a variety of transportation investments. Florida's approach is partially attributable to the state's decentralized DOT structure. District offices of the state DOT work closely with local governments and MPOs, providing a good mix of local, state, and public input in the project selection process.²
- ◆ *Beltway Rejected II* - In Atlanta, the Atlanta Regional Commission studied an outer beltway proposal supported both by FHWA and the state DOT, and found that the outer loop would not reduce congestion. All but one segment of the beltway have now been canceled.

² Information on Florida's decision-making process was obtained from the CMAQ Program Review conducted by FHWA, FTA, and EPA.



B. ISTEA produces public participation

Developing a TIP for the San Francisco Bay Area - The Transportation Improvement Plan (TIP) for the San Francisco Bay Area guided the distribution of over \$200 million in federal transportation funds for 1994; no small feat for a plan heavily influenced by public participation. The Metropolitan Transportation Commission, the Bay Area's metropolitan planning organization, demonstrated that the users of a transportation system are as much "experts" in the planning process as anyone with technical training in planning.

ISTEA expanded the focus of regional transportation plans by requiring that plans address issues related to land use, environmental preservation, economic development and quality of life. Faced with this expanded mandate, the MTC turned to area residents. An Ad Hoc Committee of elected officials, business and interest groups formed a working group to devise the region's approach to planning under the new federal mandates. The Ad Hoc Committee set out to establish priorities among the needs of maritime, aviation and surface modes. *Funding constraints added to the challenge of setting priorities: over \$550 million in program requests had to be pared down to slightly more than \$200 million in available STP and CMAQ funds.*

The MTC demonstrated a pro-active approach to developing the TIP, and the public and the Ad Hoc Committee were integral to formulating the criteria for establishing transportation investment priorities. This early involvement allows the public to have maximum influence over the resulting transportation plan. By contrast, most public participation still occurs just prior to the final approval of comprehensive plans, such that there is often little opportunity for the public to influence the outcome of the planning process.

Benefit: Faster, More Efficient Planning Process

As a result of the MTC's genuine commitment to an open planning process inclusive of the needs and values of all segments of the community, the Bay Area's TIP moved from an initial concept to a federally approved plan in only one year. The broad range of participants in the planning process generated a large base of support for the plan. While TIPs were greeted with skepticism in many communities which allowed only marginal public involvement, the Bay Area's TIP received remarkable support.

1. Benefits EPA: public participation yields environmental protection

a) In states

Maine: Maine's exemplary planning process is truly a product of the states citizenry. Following the public referendum which initiated the Sensible Transportation Policy, contributions from interest groups, transportation professionals, and the general public were all crucial to the formulation of the state's new planning guidelines. Environmentalists, bicycle and rail advocates, paving contractors, developers, the disabled, the business community and numerous state and local transportation agencies and government bodies collaborated on the Transportation Policy Advisory Committee. By giving a voice to all interested parties, every group found something to gain by implementing the Sensible Transportation Policy.

- ♦ *Participation in Minnesota* - ISTEA's requirement of public participation has proven critical for groups such as the Neighborhood Transportation Network (NTN) in Minnesota. Using ISTEA's



requirement of fiscal constraint and evaluation of alternatives, NTN was successful in reclassifying controversial highway projects as "projects not yet fully studied."

b) In cities

- ◆ *Albany, NY TIP* - The MPO for Albany involved the public in brainstorming sessions and focus groups prior to formulating a draft five-year TIP. The resulting plan placed a greater emphasis on maintenance, environmental needs and quality of life investments than previous plans.
- ◆ *Chicago, IL* - The Chicago Westside Green Line project is using ISTEA funds to develop transit superstations as part of a combination transportation and urban redevelopment project. The project demonstrates not just good funding flexibility, but a public participation triumph by Lake Street El Coalition, which reversed plans to shut the Green Line altogether.
- ◆ *Beltway Rejected* - Kansas City's MPO reviewed plans for a beltway and asked residents to participate in the process. The result was a decision to scrap plans for the big-budget new highway.
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- ◆ *Boise CMAQ Hearings* - The City of Boise, Idaho placed all citizens attending public hearings on transportation priorities on a mailing list to receive minutes of the session in which they participated, as well as other materials related to transportation planning in their community. Boise officials hope that this simple good faith effort will lead to more prevalent and informed public involvement in decision-making in the future.

c) In rural areas

- ◆ *Alternatives to Highways* - In Montana, rural residents opposed DOT's plans to widen US 93 from two lanes to five. Residents organized a rural transportation management association for car and van pooling—and have begun research public transportation options. Together, these measures could save millions in construction costs, far reduce environmental impact, and better meet the needs of rural residents.

2. ISTEA public participation benefits the community

- ◆ *Oakland, CA* - In the Fruitvale BART project, citizens used ISTEA funds to help the low-income, predominantly Latino community develop plans for transit-oriented development.
- ◆ *The Falmouth Forum* - The Cape Cod community of Falmouth made an exceptional effort to include the public from the very beginning of the formulation of the region's first comprehensive transportation plan. Efforts were made to educate the public about the issues before decisions were made. The core of the resulting plan was a consensus on community values, such as preservation of the community's unique character, rather than technical performance standards.



III. ISTEA directs money to project other than highways



A. ISTEA improves the environment through transportation enhancements

Cucumber Creek, Oklahoma Pollution Mitigation - Mitigation efforts in southeastern Oklahoma to correct the harmful effects of runoff from the highway were completed at the end of 1995. Water quality in Cucumber Creek, which is located near the highway right-of-way was degrading due to runoff from the roadway. This contamination threatened the viability of several rare species of plants and animals.

In order to remedy the runoff problems and preserve the integrity of Cucumber Creek, the state of Oklahoma used approximately \$65,000 in ISTEA funds to regrade the land between the highway and stream and expand the Cucumber Creek Preserve. This project was eligible for Transportation Enhancements funds because the mitigation efforts were *not* a part of a highway construction or rehabilitation effort.

By directing runoff to less fragile areas, further pollution of habitat has been reduced. The regrading of the highway right-of-way also prevents further erosion of the soil on the sides of the roadway. Erosion had been exacerbating the problem of runoff from State Highway 259 because the natural filtration of water through the soil becomes increasingly ineffective. Consequently, the direct impact of runoff into Cucumber Creek also increased.

In order to further protect the native habitat, the Cucumber Creek Preserve was expanded by 400 acres. This additional land buffer will help to protect the stream from the encroachment of potential future development near this fragile habitat.



B. ISTE A mitigates habitat damage, and enhances ecosystems

Preservation of Alaskan Salmon Habitat - In September of 1995, the Federal Lands Highway Division (FLHD) completed reconstruction of the 7.3 mile Exit Glacier Road near Seward, Alaska. The previous roadway alignment was a dangerous, single lane path which was repeatedly washed away by glacier-fed rivers in the region. In order to transform the Exit Glacier Road into a safe and reliable two-lane passage, it was necessary to realign the road through some prime wetlands and riparian zones which were very important to the spawning and rearing habitats of migratory fish.

The FLHD, in collaboration with local and state officials, as well as the National Park Service and US Forest Service, spent approximately \$150,000 of ISTE A STP funds to implement extensive mitigation efforts to preserve and improve the natural habitat along the Exit Glacier Road. Special pipe culverts were installed to enable the riverbed to cross under the roadway. Normal culverts have a slick bottom which increases the river current and prohibits fish from making their way upstream. The Exit Glacier Road culverts were partially filled in with rocks and soil to stabilize the current. A series of twelve ponds used by the salmon for spawning and rearing were also created. Heavy rock rip-rap and large root wads were also put in place create natural resting sites in the heavy river current to create a natural "ladder" for fish climbing upstream to spawn.

Additional examples of ISTE A funded habitat protection and mitigation projects include:

- ◆ *Mule Deer Crossings* - Colorado has constructed a series of underpasses on Interstate 70 especially for mule deer. The underpasses typically consist of an enlarged pipe culvert which is capable of accommodating large animals such as deer. Mitigation of wildlife hazards are eligible for STP funds if the effort is part of a highway improvement project. These mitigation efforts can also be funded by the Transportation Enhancements program if the project is not directly related to a highway project.

Construction of special passageways for transitory and migratory land animals is an important form of highway mitigation. Many states with large deer populations have built fences and other barriers along highways to attempt to prohibit deer from crossing roadways. Inevitably, however, animals find a means to circumvent the fencing and find a path across the highway. In order to mitigate conflicts between roadways and the migratory patterns of wildlife, it may be necessary to create a special route for animals to go over or under the highway.

Designing special structures to accommodate animal movement typically requires extensive study to determine animal movements and the likelihood that animals would utilize the structures. These preliminary studies may be eligible for highway funds as a necessary part of mitigation efforts.

- ◆ *Protecting Florida's Panthers* - The state of Florida encountered numerous environmental concerns when it developed plans to upgrade a major state highway into Interstate 75. Of primary concern was the habitat of the Florida panther, an endangered species native to the region surrounding the highway alignment. Sections of the highway were elevated to allow the panthers to maintain their migratory patterns with minimum disturbance. In all, 24 overpasses, costing an average of \$750,000 were built along a 40 mile stretch of the highway.
- ◆ *Wildflowers at Rest Areas* - Enhancement funds for landscaping can also be an innovative safety tool. The Idaho state DOT has planted wildflower gardens adjacent to many of the rest areas along Intestates and state highways as a means of enticing motorists to take a break from driving. More frequent and longer stops by drivers result in reduced accidents and fatalities.



1. *And protects and enhances communities*

Woodbridge, NJ Train Station Renewal - When NJ Transit decided to revitalize the Woodbridge train station, they made sure the planned improvements fit the needs of the users. The station was observed at all hours of the day to see exactly how use patterns at the station changed during the day. The local government and public were also involved in the design and planning process to produce a sense of community ownership of the project.

Using a mix of ISTEA Enhancement funds, state and local transportation funds, as well as private contributions, improvements were made to nearly every facet of the Woodbridge station. Commuter spaces, such as the platform, parking lot and the walkways leading to the station were upgraded with landscaping and new surfaces. Benches, trash receptacles, bicycle racks and phone booths were added or replaced. Decorative canopies and signs were designed to provide a unique and unified visual theme for the station. New space for small businesses also attracted several local entrepreneurs to the sites.

The success of the partnership effort to improve the Woodbridge station has encouraged New Jersey Transit to apply similar public and community involvement techniques in other projects throughout the state. The inclusive approach has proven to produce a superior design that does a better job of promoting transit.

Additional examples of successful community-oriented Transportation Enhancement projects include:

- ◆ *Stone Arch Bridge* - Transportation Enhancement funds enabled the city of Minneapolis to renovate the Stone Arch Bridge, an historic rail link abandoned in 1978, as a pedestrian and bicycle pathway crossing the Mississippi River. The structure now provides convenient and safe access to downtown Minneapolis, and preserves a vital cultural and historic community resource.
- ◆ *Baltimore Greenway* - A six-mile greenway connecting northwest Baltimore with the city's Inner Harbor provides convenient access between residential areas and business districts, retail markets and waterfront recreational facilities.
- ◆ *Madison's Bicycle Highway* - ISTEA Enhancement Funds have been used for a bicycle highway in Madison, Wisconsin. Six percent of its daily trips and 15% of its commuter trips are done on bicycle in Madison. This project has "done as much as tens of millions of dollars in new highway construction."
- ◆ *Archeological Records* - The New Mexico Office of Cultural Affairs used Enhancement funds to develop a statewide database of sensitive archeological sites for use with transportation planning tools such as geographic information systems (GIS). The database will enable planners to take significant cultural resources into account at an earlier stage of project development.
- ◆ *Roundhouse Restoration* - The North Carolina DOT is using Enhancement funds to restore the Spencer Shops Roundhouse—a structure used in train repair and turning trains around prior to modern switching and reversible-direction locomotives). The roundhouse is the largest surviving structure of its kind in the nation and will be converted into the North Carolina Transportation Museum.



C. ISTEAs funding flexibility is being used to fund environmentally-superior projects

1. From highways to transit

- ◆ In communities across America, more than \$1.3 billion has been shifted from highway to transit projects at the request of local governments, using their new flexibility under ISTEA.

2. From regular transit to innovative transit

- ◆ LA MTA is shifting some funds to start an innovative para-transit shuttle to serve low-income neighborhoods in LA. (This is the project we're supporting with EDF.)

3. In states

- ◆ *Maine*: This unique dedication to transportation alternatives is already producing significant results. The 1994-95 Transportation Improvement Plan for Portland, Maine, for example designated half of the regions' capital investment to non-highway projects. Funds that would traditionally have been spent on new roads will fund bikeways, pedestrian enhancements and transit service improvements.
- ◆ *Wisconsin buses* - \$4 million of flexible STP funds have been used to supplement regular FTA funding programs for buying buses in small communities in Wisconsin. These bus systems are considered critical for the employment of those who would otherwise end up on welfare.
- ◆ *Bridge Preservation* - In Vermont, most bridges were built after a 1927 flood, and are now reaching the end of their life. Rather than replacing them all with a standard new AASHTO bridge, the state has used ISTEA's new flexibility and funding provisions to rehabilitate or replace historic bridges on a case-by-case basis. Preserved: not only the bridges, but the money, land, and houses that the wider and more expensive AASHTO bridges would have required. (Funding flexibility)

4. In cities and MPOs

- ◆ *Chicago, IL* - The Chicago Westside Green Line project is using ISTEA funds to develop transit superstations as part of a combination transportation and urban redevelopment project. The project demonstrates not just good funding flexibility, but a public participation triumph by Lake Street El Coalition, which reversed plans to shut the Green Line altogether.
- ◆ *Level Playing Field* - The Madison, Wisconsin MPO developed a transportation investment evaluation system which treats highways and transit fairly using the planning criteria identified in ISTEA. The result of the new scoring system has been a shift in the use of STP funds away from highways, to transit, bicycle and pedestrian projects. The impact of the new approach to planning is shown by Madison's recent selection as one of the most bicycle-friendly communities in the nation.
- ◆ *Alternatives to Highways* - In Montana, rural residents opposed DOT's plans to widen US 93 from two lanes to five. Residents organized a rural transportation management association for car and van pooling—and have begun research public transportation options. Together, these

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measures could save millions in construction costs, far reduce environmental impact, and better meet the needs of rural residents.

- ◆ *Transit Daycare Center* - In San Francisco, ISTEA funded a new transit center that includes daycare and other facilities for working parents.
- ◆ *Train Station Revitalization* - In Greensburg, PA, ISTEA Enhancements funds are being used to renovate a historic train station on Amtrak's Chicago-to-New York route. The redevelopment will help revitalize downtown Greensburg and Amtrak predicts tripling ridership.



D. ISTEA meets the needs of the non-driver

1. Transit, Pedestrian & Bicycle Programs

Walkway to Gateway - The Greater Cleveland Regional Transit Authority (RTA) has built a 1,005-foot-long, elevated, climate-controlled walkway connecting Tower City Center, Cleveland's main transit station, to the new Gateway Sports & Entertainment Complex. From its windows, the Walkway offers a scenic view of the Cuyahoga River and displays various works of art through the Arts-In-Transit program. It is the RTA's main station for its Airport-Windermere and Shaker Heights rapid transit lines and the terminus for nearly all downtown-oriented bus service.

The Gateway Sports & Entertainment Complex, which opened in 1994, consists of Jacobs Field and Gund Arena, the new homes of the Cleveland Indians and the Cleveland Cavaliers. Unlike the old stadium and arena in suburban Cleveland, which had little to no transit access, the new site enables fans to make much greater use of public transportation to attend events.

The Walkway provides convenient access from Tower City to the Gateway Complex, shielding fans from both inclement weather and street traffic. It encourages increased use of public transportation by removing a major constraint hindering transit use. By constructing the Walkway, the RTA completed the link from multiple transit origins to the final destination of the Gateway Complex and made the whole trip more convenient than driving. It also decreased congestion and improved air quality in downtown Cleveland by removing cars and pedestrians from the roadways.

In the first 16 months since the Gateway Complex and Walkway opened in April 1994, more than 940,000 people have used the Walkway to complete their transit trips, removing 625,000 automobile trips and 5 million vehicle miles traveled on the road system. Seventeen percent of the fans attending sporting events at the Gateway Complex in 1994 took advantage of public transportation.

Additional examples of successful Transportation Enhancement projects include:

- ◆ *Accommodating Pedestrians* - Naples, FL, with a median age of 65, installed a network of sidewalks to make it quicker and safer to walk downtown. The city has a street system which did not originally include sidewalks. ISTEA Enhancement funds will pay for the design and construction of walking paths to link neighborhoods with recreation and the town center.
- ◆ *Enhanced Suburban Transit* - The Minnesota Valley Transit Administration recently constructed a suburban transit hub designed to meet the varied demands of suburban commuters. The transit hub offers convenient access to high occupancy vehicle (HOV) lanes on regional highways and features retail and office space, a daycare facility, senior housing, expanded parking and a movie theater.
- ◆ *Suburban Transit Options* - In Kansas City, a group of social service agencies, economic development agencies, the local transit provider and transit union, and state and local elected officials coordinated to develop transit options for a suburbanized area of Kansas City—meeting the needs of clients of the social services agencies, students, and the service and hospitality industry.
- ◆ *Flexing Funds* - \$4 million of flexible STP funds have been used to supplement regular FTA funding programs for buying buses in small communities in Wisconsin. These bus systems are considered critical for the employment of those who would otherwise end up on welfare.



- ◆ *The Pinellas Trail* - A 45-mile trail linking St. Petersburg to Tarpon Springs, Florida, connects people and socio-economic levels in eight communities. It passes several major employment sites, five schools, and numerous parks and natural areas. A recent survey of the trail revealed that more than one-third of all users use the trail for transportation to school, work, or errands. Nearly 60 percent of those using the trail for transportation travel on it five days a week, and 87 percent do so at least twice a week.
- ◆ *The Katy Trail* - The 235-mile Missouri trail traverses nine counties and adjoins 35 towns ranging in population from 60 to 60,000. These communities were initially opposed to the trail, fearing rowdy and destructive users. Visitors flocking to the new rail-trail and the trail-side towns proved to be responsible, amicable guests who needed goods and services available in the towns. Restaurants, pubs, bed-and-breakfasts, wineries, bicycle rental shops, antique dealers, and campgrounds all opened to meet visitor needs. A user survey on the trail's western half showed that trail visitors generated an estimated \$3 million in local revenue.
- ◆ *CNG Buses in Milwaukee* - CMAQ funds have been instrumental in the purchase of natural gas fueling stations in Milwaukee as well as road improvements to improve congestion. Both projects are important in the areas goal of improving air quality.

2. *Bicycle Programs*

Phoenix's Bike-on-Bus Program - The City of Phoenix established a citizens' task force to assist in the design and implementation of the Bike-on-Bus program. The task force, made up of bicycle activists from the region, also selected test routes. After a trial run to test the feasibility of bringing bikes inside the bus, the task force designed a prototype rack to fit on the outside of the buses. The program was designed to make it as easy as possible for bicyclists to bring their bikes with them on transit trips. No extra fare is charged for use of the bicycle racks. The racks were designed to be operated manually by one person.

An initial \$10,000 grant from the Arizona Department of Transportation's air quality demonstration program gave the city the resources to design and install 35 bike racks, each holding two bicycles at a time. In August 1991 the City of Phoenix requested that the Maricopa Association of Governments include an expanded, permanent Bike-on-Bus program in their 1992 transportation improvement program (TIP). The city applied to the Regional Public Transportation Association for the local funds needed to match its Federal Section 9 Transit funds. RPTA approved the application and as of July 1992 the city had outfitted all 350 of its buses with bike racks.

Additional examples of successful non-motorized transport projects include:

- ◆ *Seattle's Bike and Ride* - Seattle's transit agency, Metro, has equipped every one its 1,200 Metro buses with a bicycle rack. Now Seattle residents can use bike trips as a regular part of their commute with no additional cost. The Bike and Ride program enables Seattle's residents to ride part of the way to work and finish their trip aboard a bus, or to take the bus one way. The program offers an economic incentive by saving residents money on parking, gasoline, and car maintenance. Biking and busing also provides environmental benefits by reducing traffic congestion and preserving air quality around Puget Sound. In 1993, the Bike and Ride program received \$915,400 in federal funds through the Congestion Mitigation and Air Quality (CMAQ) program, and \$78,000 through Metro's local match. These funds also were used for the establishment of a similar program using vanpools instead of buses. Approximately 70 vans were retrofitted with bike racks.



- ♦ *Bicycle Lockers in Chicago* - One of the main deterrents to the use of bicycles as a primary mode of transportation in the United States is the lack of secure places to store a bicycle. Bicycle lockers respond to this need by providing safe and convenient storage of a bicycle, with some additional space for other belongings such as a helmet. Typically lockers are either rented on a monthly basis (similar to renting a space at an auto parking facilities) or the rider pays a per-use fee in exchange for the key to a locker, much like lockers found in airports. Lockers are placed at major activity centers, such as transit stations, shopping malls, office complexes and government centers, making cycling a realistic option for the most common trips and errands. The City of Chicago has addressed this issue by spending more than \$1 million of CMAQ funds on bicycle racks and lockers in the Chicago metropolitan area. Metra, the region's commuter rail line, is placing a total of 169 bike lockers at nine commuter rail stations. A larger effort by the Chicago area's Council of Mayors, entails installing nearly 1,000 bike racks and 49 bicycle lockers. More than 100 of the racks will have lock boxes to accommodate helmets and other small items. The racks and lockers will be spread throughout a six county region, making bicycle transportation more convenient.

3. Greenways

New York City's Greenway - New York City has undertaken the nation's most ambitious urban greenway system—350 miles of landscape bicycle-pedestrian paths along natural and manmade linear spaces such as rail and highway rights-of-way, river corridors, waterfront spaces, parklands, and, where necessary, city streets. Greenways and trails are ideally suited to the flat, compact urban environment of New York City. They will be mostly hard-surface paths, paved with asphalt or concrete, although some locations may require more natural material such as crushed limestone or a wooden walkway to protect fragile ecosystems.

The system is envisioned to accommodate a broad array of non-motorized uses: cyclists, joggers, strollers, people in wheelchairs, dog walkers, and skaters. The system will complement and connect with on-street bicycle routes and the city's sidewalks to ensure continuity for all users.

Bridge and ferry water crossings will be significant parts of the greenway system, offering inter-borough connections and access to regional routes. Connections to Long Island, New Jersey, upstate New York, and Connecticut will allow residents to bike or hike to regional recreational resources.

A number of routes have been classified as priorities based on specific criteria. Corridors with roadway congestion or air quality problems were identified where moving people from cars and taxis to bicycles or walking could make a significant difference. Routes were also established based on their potential for a high volume of use because of proximity to major employment, cultural or educational centers, or to regional parks.

Additional examples of successful non-motorized transport projects include:

- ♦ *Baltimore's Greenway* - Baltimore's parklands and unprotected stream valleys together make up one of the nation's largest urban open space systems. Throughout the city, communities and resource professionals have come together to transform the stream valleys into linear parks and recreational "gateways." That commitment is possible with federal funds available through the Transportation Enhancements Program. The greenway will draw both local users and tourist to Baltimore's downtown Inner Harbor, enabling non-automotive access to the business district, retail markets, and the waterfront park.



- ◆ *Northern Delaware Greenway* - The Northern Delaware Greenway will promote public visitation to the parks via alternative transportation—hiking, bicycling, and jogging will be made more attractive. Currently, the lack of safe routes has discouraged bicycle and exercise enthusiasts. The greenway will link bicyclists and pedestrians between local Routes 92, 100, 52, and 202, as well as connections to local bus routes. In addition, the Northern Delaware Greenway will provide safe, pollution-free access to two large office complexes and many local businesses located nearby. This project is receiving support of ISTEA funds for the rehabilitation effort.
- ◆ *The Schuylkill River Greenway* - The Schuylkill River Greenway in suburban Philadelphia adjoins several forms of transportation. A household can realize \$3,000 annual savings by giving up its second car and taking advantage of public transit. Ten times more households are within bicycling distance of transit than are within walking distance, which makes trails, on-street bicycle facilities and bicycle parking crucial for the creation of convenient and economical travel options.