



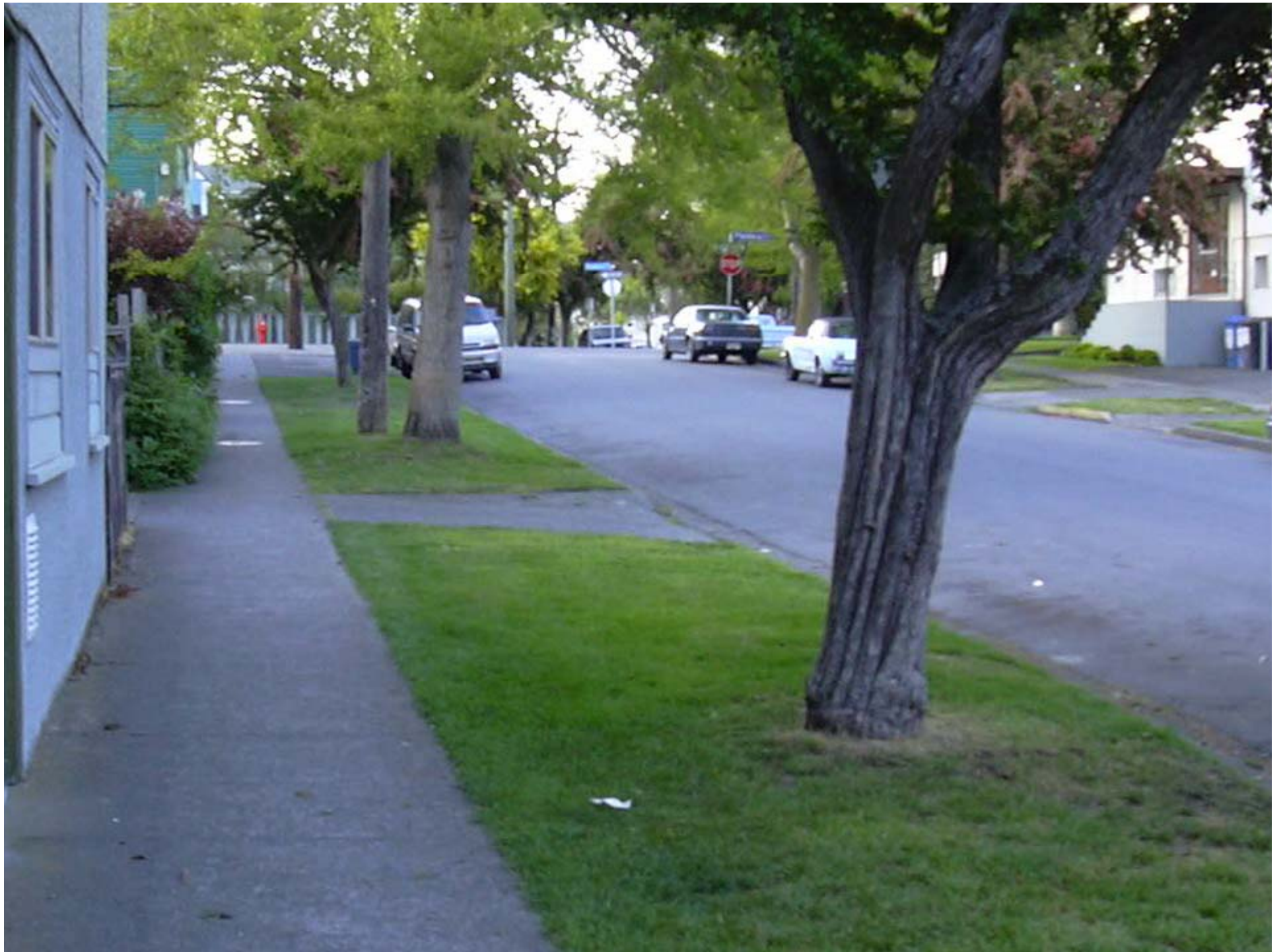
# Work Smarter Not Harder to Improve Transportation

Todd Litman  
*Victoria Transport Policy Institute*

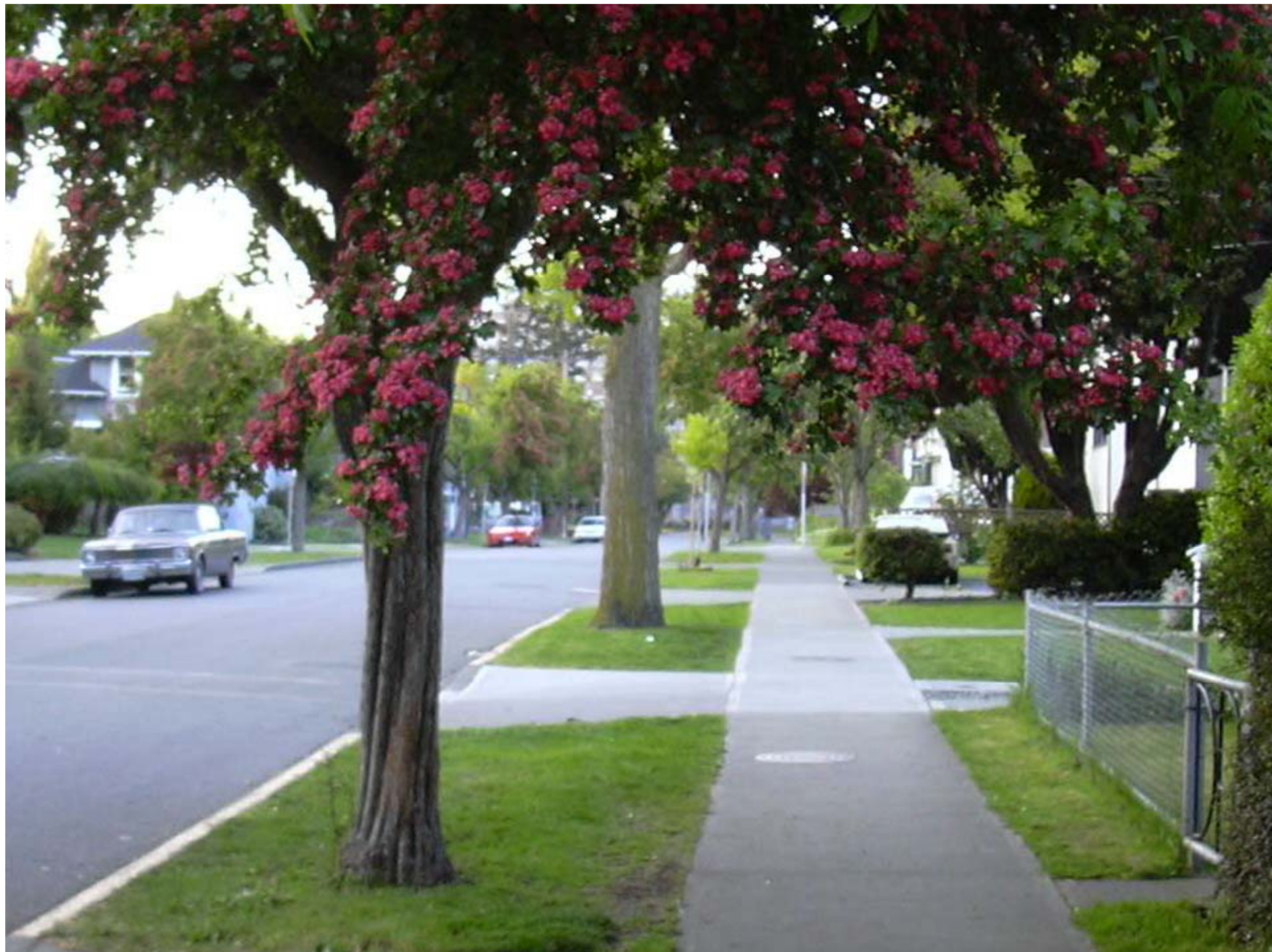
**Making Connections**  
Improving Mobility and Design in the Treasure  
Valley  
26 March 2008  
Boise, Idaho























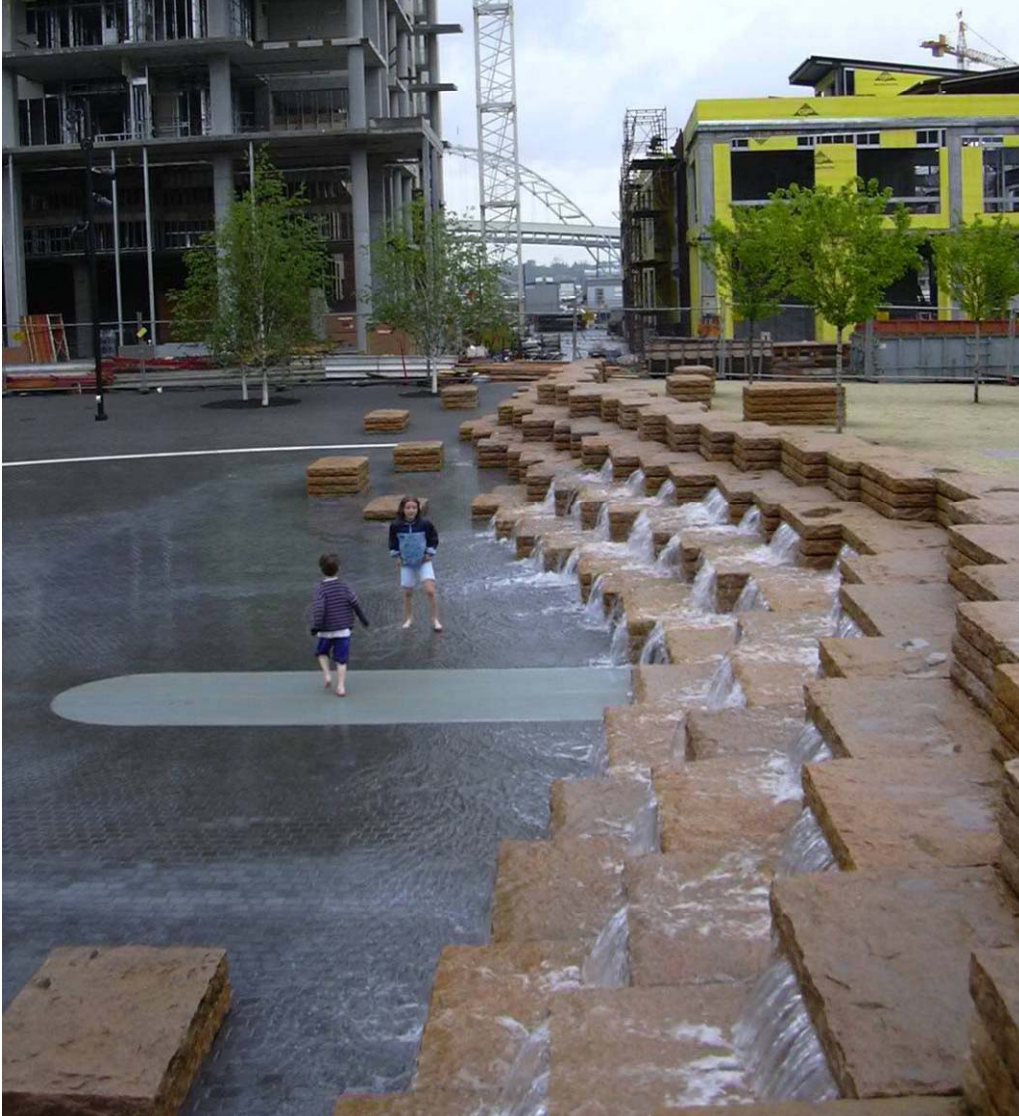
George & Dragon  
Neighbourhood  
Pub Style  
Restaurant

HOLLYWOOD  
TONIGHT  
Festivals

George & Dragon

OPEN

# *Create Paradise*

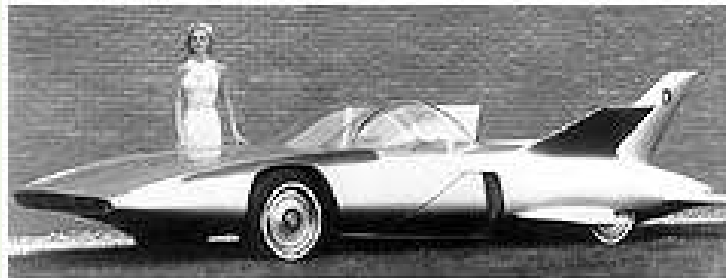


Paradise is not a distant place, it is something we can create in our own communities.

# *Past Visions of Future Transport*



1949 ConvAIRCAR Flying Car



1958 Firebird



Segways

# *2001 A Space Odyssey*



# *Wheeled Luggage*



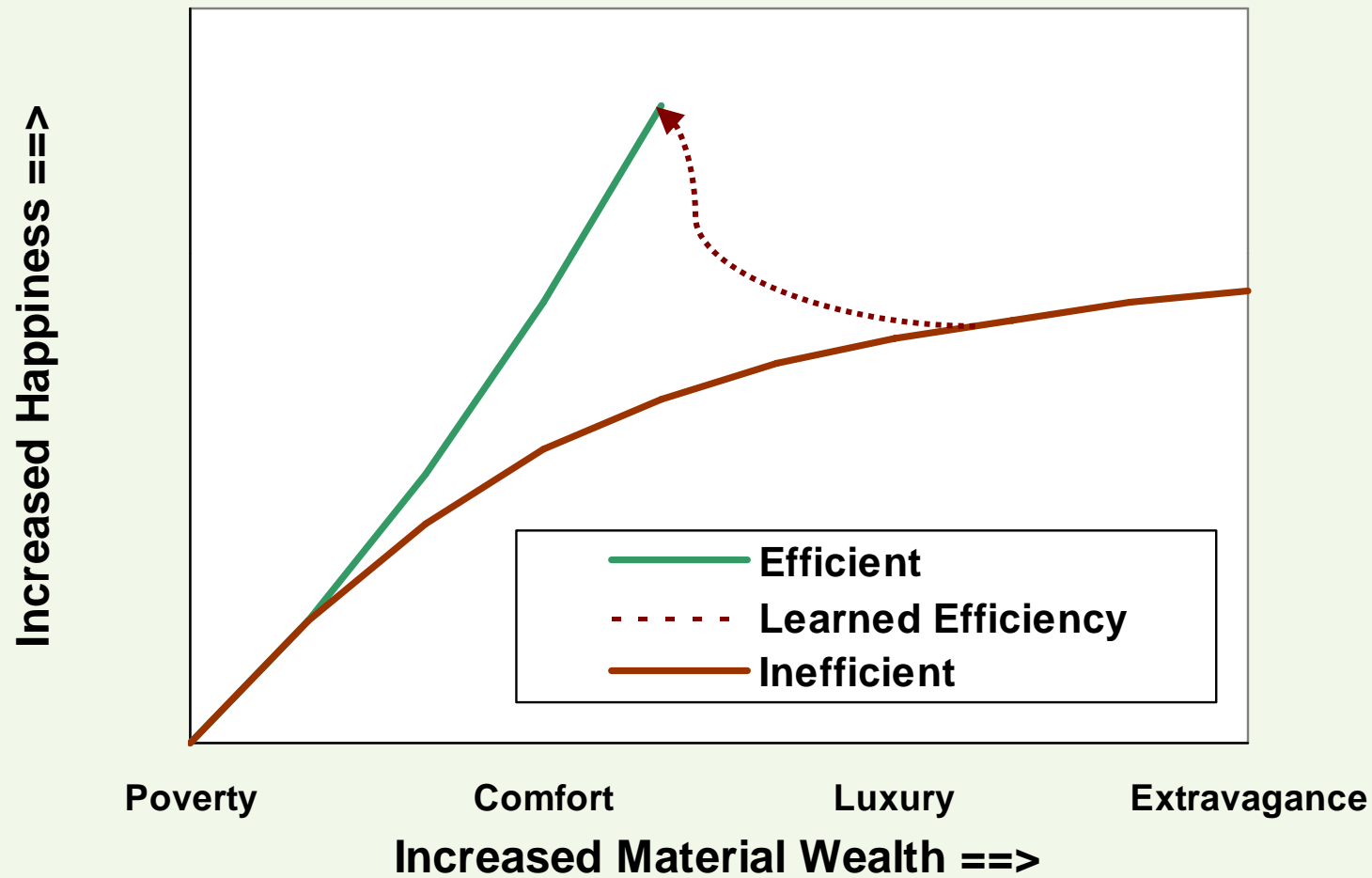
# *Sustainability*

- Sustainability emphasizes the integrated nature of human activities and therefore the need for coordinated planning among different sectors, jurisdictions and groups.
- Sustainability planning is to development what preventive medicine is to health: it anticipates and manages problems rather than waiting for crises to develop.





# *Wealth Versus Happiness*



# *Paradigm Shifts*

- **Growth** - expanding, doing more.



- **Development** - improving, doing better.

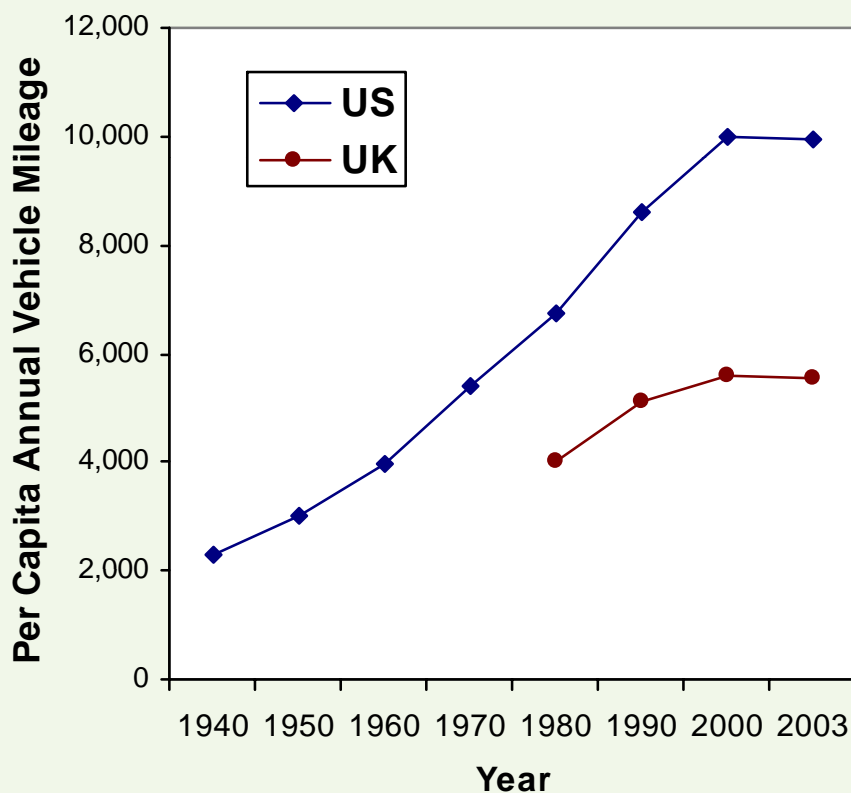


- **Mobility** - physical movement.



- **Accessibility** - obtaining desired goods, services and activities.

# *Trends Supporting Multi-Modalism*



- Motor vehicle saturation.
- Aging population.
- Rising fuel prices.
- Increased urbanization.
- Increased traffic and parking congestion.
- Rising roadway construction costs and declining economic return from increased roadway capacity.
- Environmental concerns.
- Health Concerns

# *What is "The" Transportation Problem?*


- Traffic congestion?
- Road construction costs?
- Parking congestion or costs?
- Excessive costs to consumers?
- Traffic crashes?
- Lack of mobility for non-drivers?
- Poor freight services?
- Environmental impacts?
- Inadequate physical activity?
- Others?





## *Current Transport Planning*

Current planning tends to be reductionist: each problem is assigned to a single agency with narrowly defined responsibilities. For example:

- Transport agencies deal with congestion.
  - Environmental agencies deal with pollution.
  - Welfare agencies deal with the needs of disadvantaged people.
  - Public health agencies are concerned with community fitness.
  - Etc.
- 

# *Reductionist Decision-Making*

Reductionist planning can result in public agencies implementing solutions to one problem that exacerbate other problems facing society, and tends to undervalue strategies that provide multiple but modest benefits.






## *Win-Win Solutions*

Put another way, more comprehensive planning helps identify “Win-Win” strategies: solutions to one problem that also help solve other problems facing society.

**Ask:**

*“Which congestion-reduction strategy also reduces parking costs, saves consumers money, and improves mobility options for non-drivers.”*

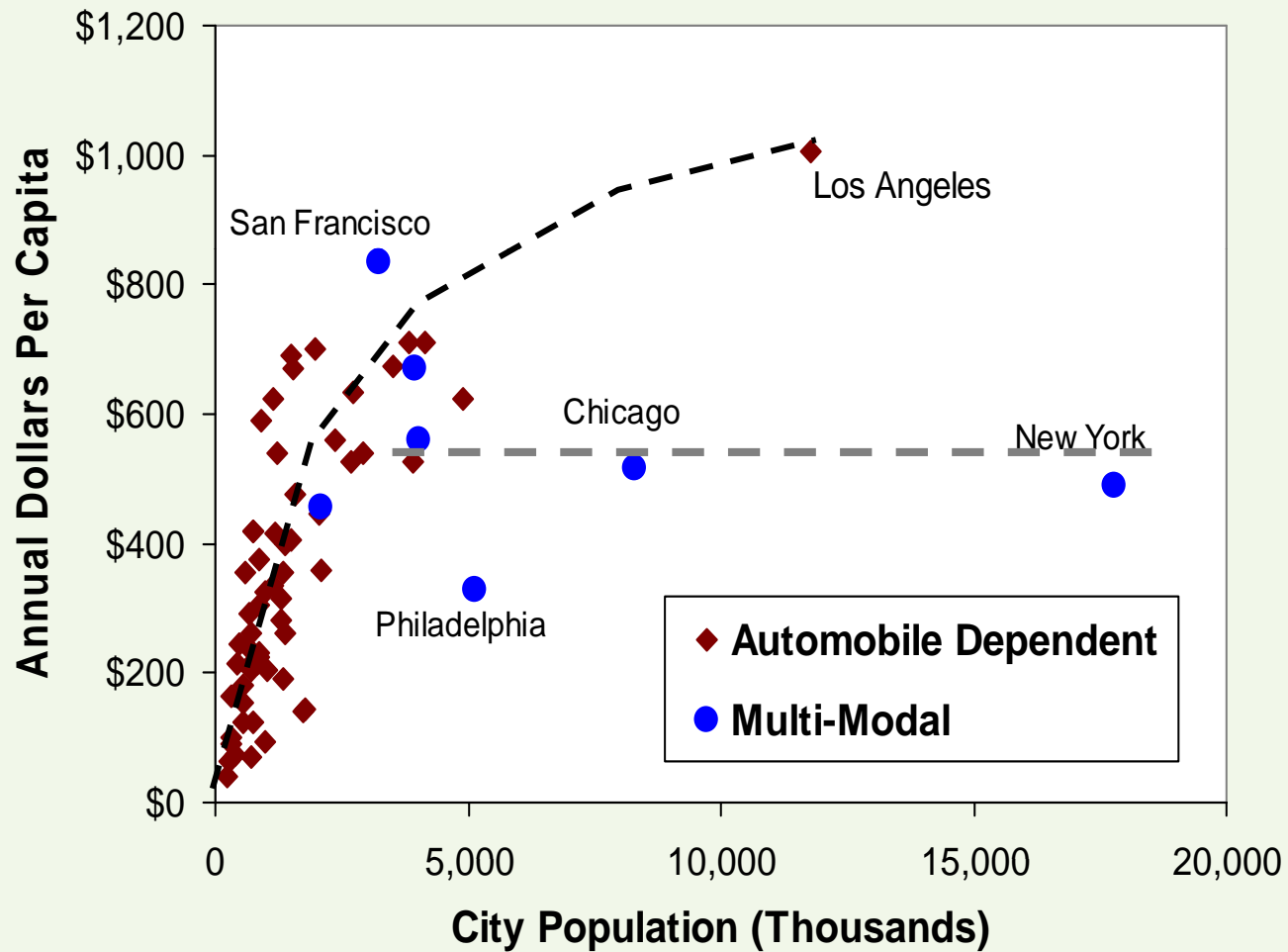


# *Comparing Benefits*

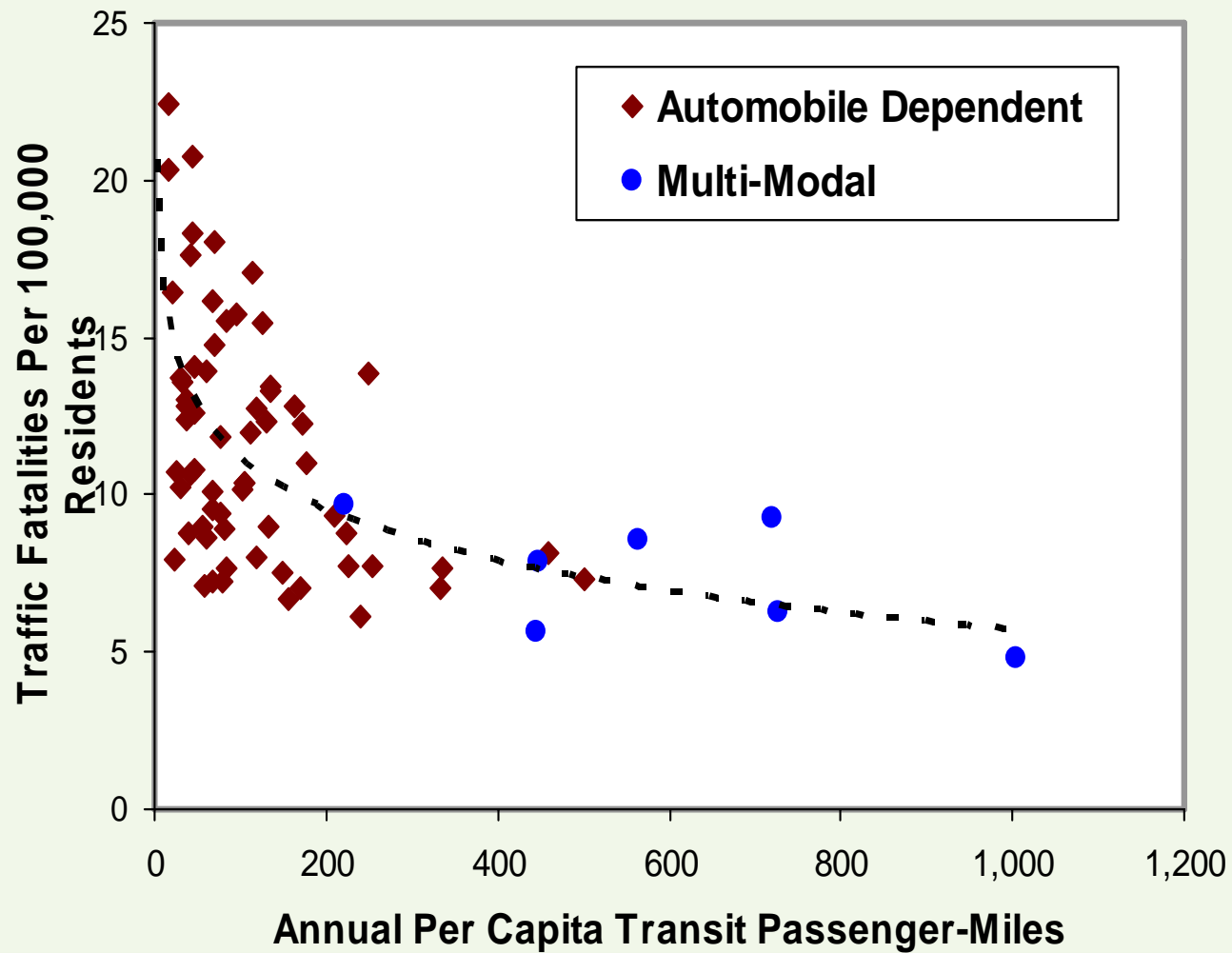
<b>Planning Objectives</b>	<b>Expand Roadways</b>	<b>Efficient and Alt. Fuel Vehicles</b>	<b>Mode Shifts</b>
Reduce traffic congestion	✓		✓
Roadway cost savings			✓
Parking cost savings			✓
Consumer cost savings			✓
Improve mobility options			✓
Improve traffic safety			✓
Energy conservation		✓	✓
Pollution reduction		✓	✓
Land use objectives			✓
Public fitness & health			✓



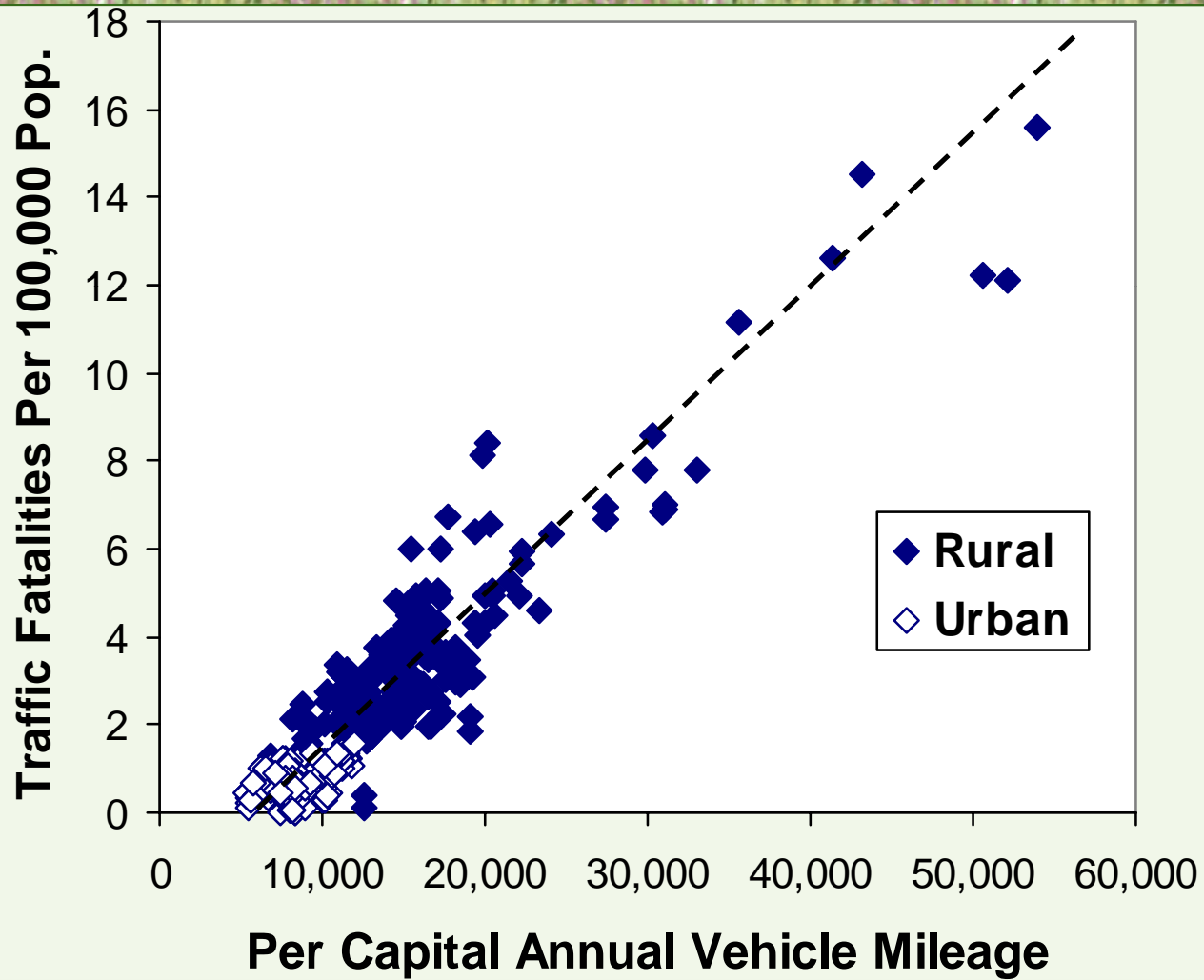
# Congestion Costs



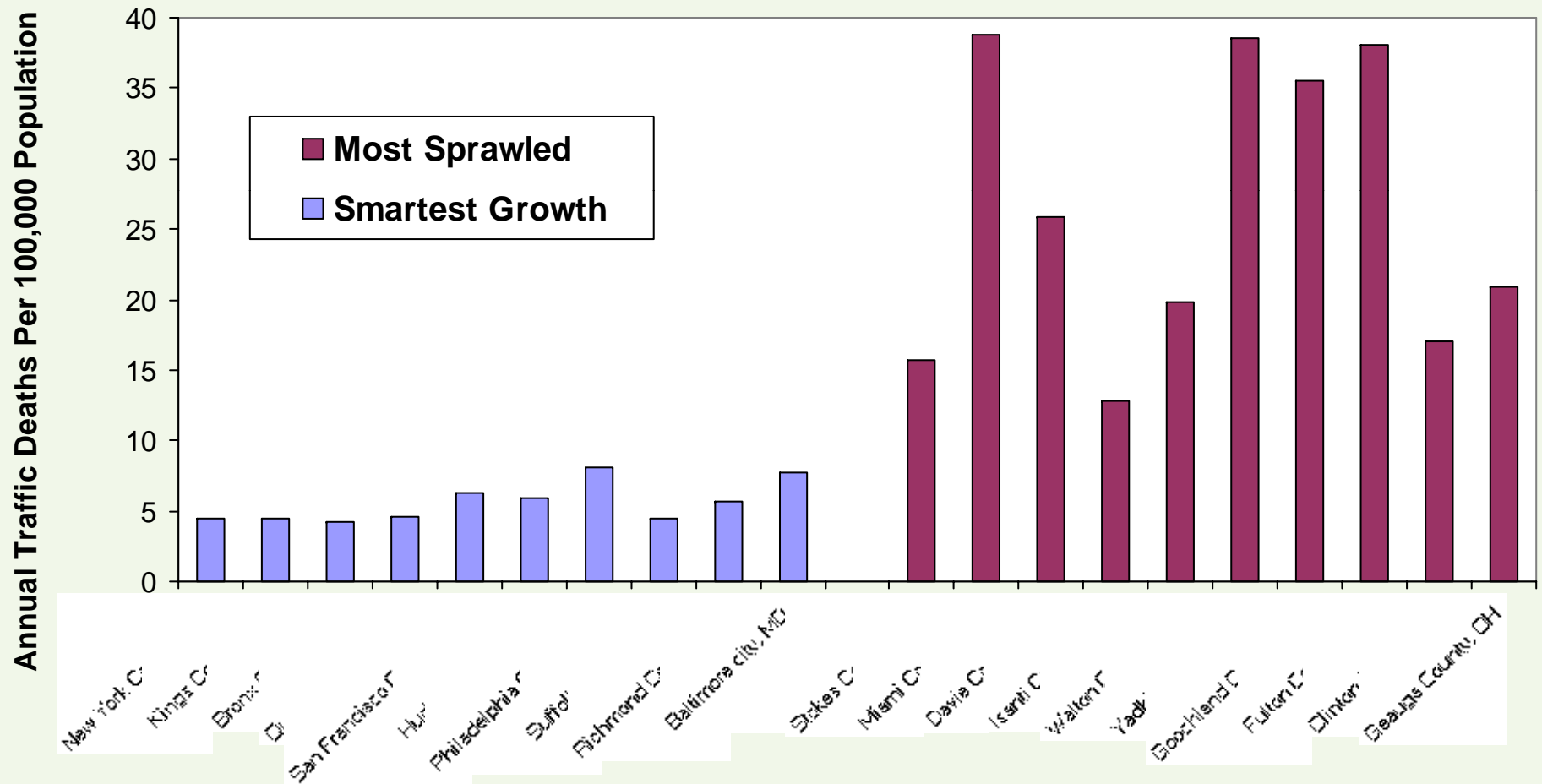
# Traffic Fatalities



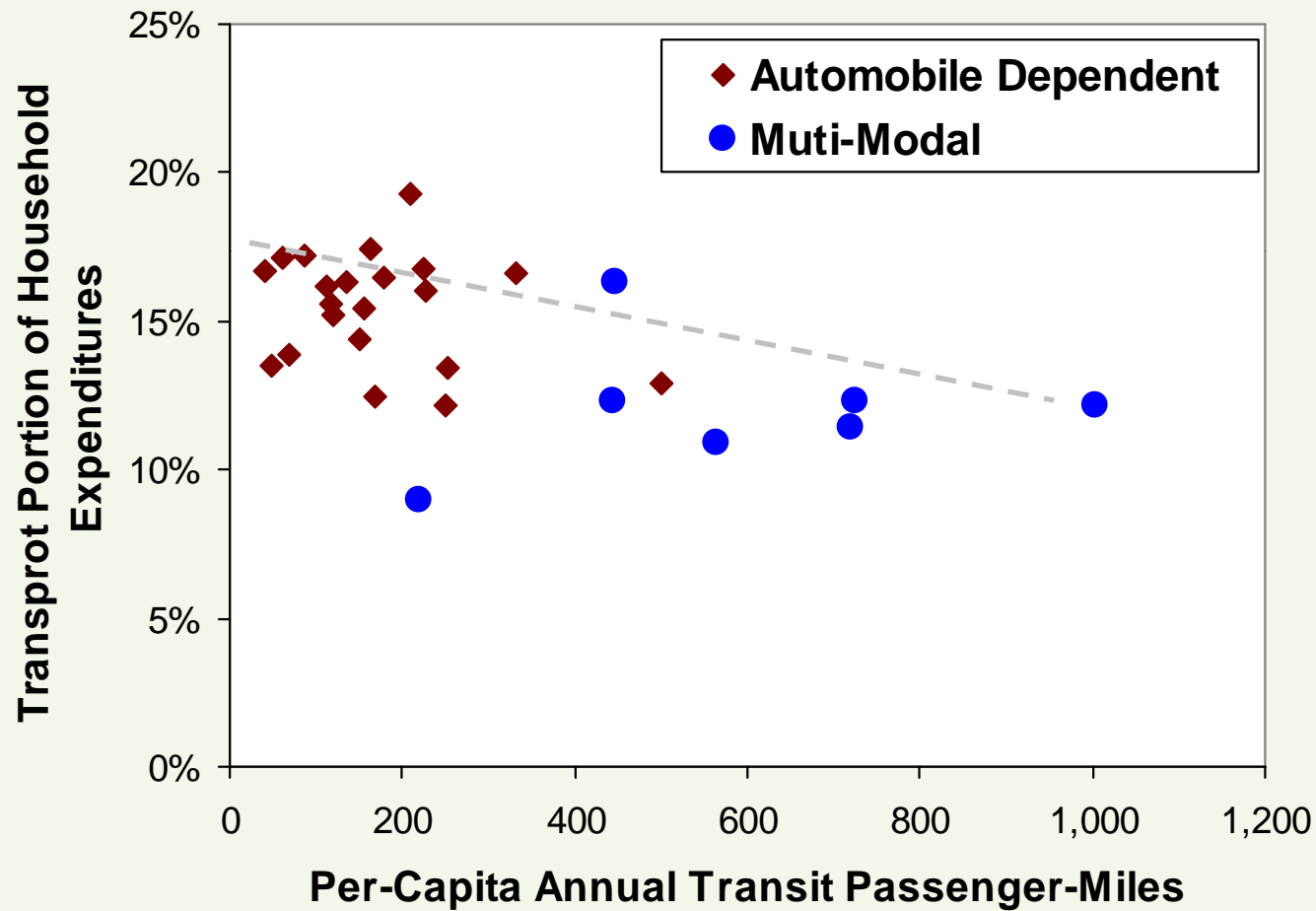
# *U.S. Crash Rates*



# Smart Growth Safety Impacts



# Household Transport Expenditures

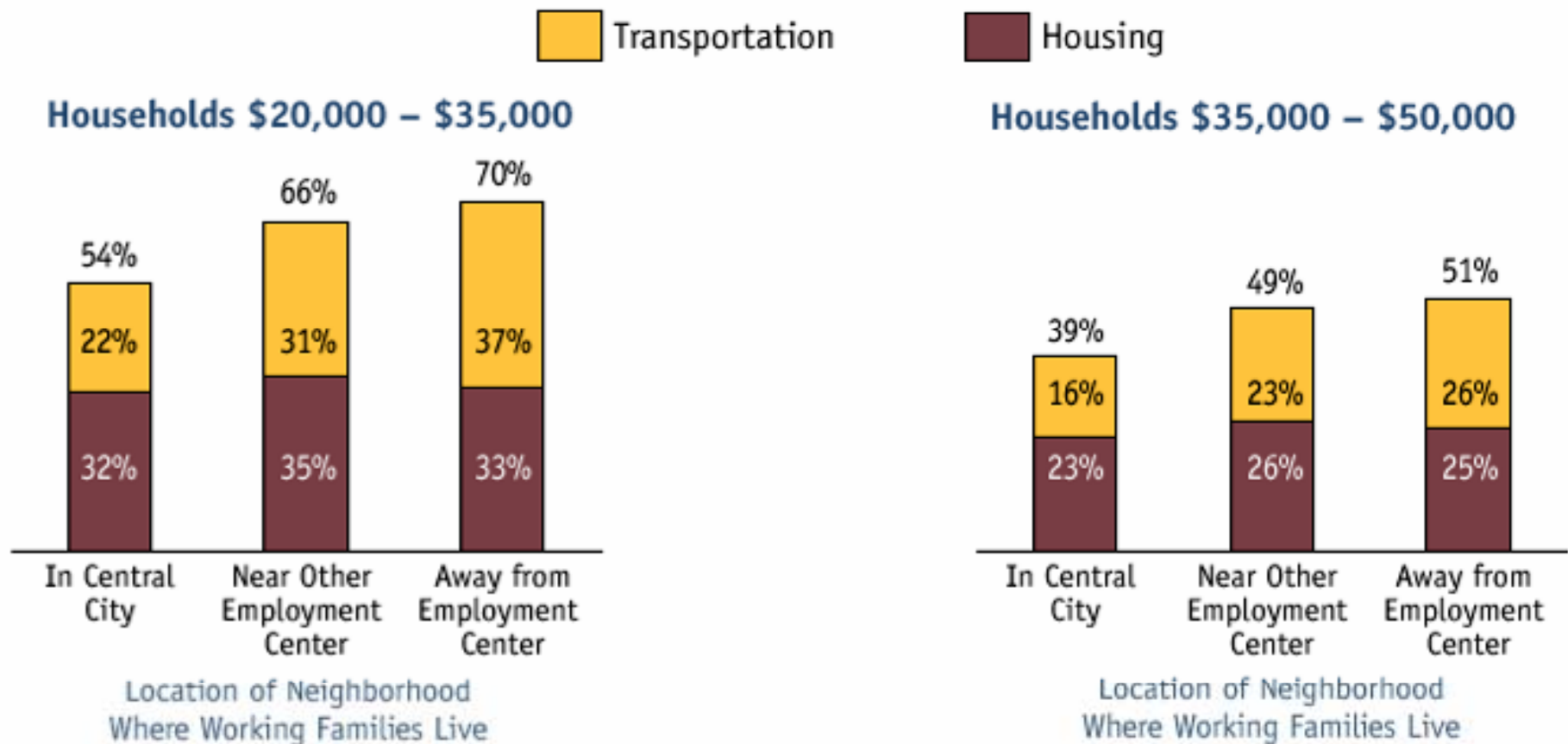


# *Annualized Costs*

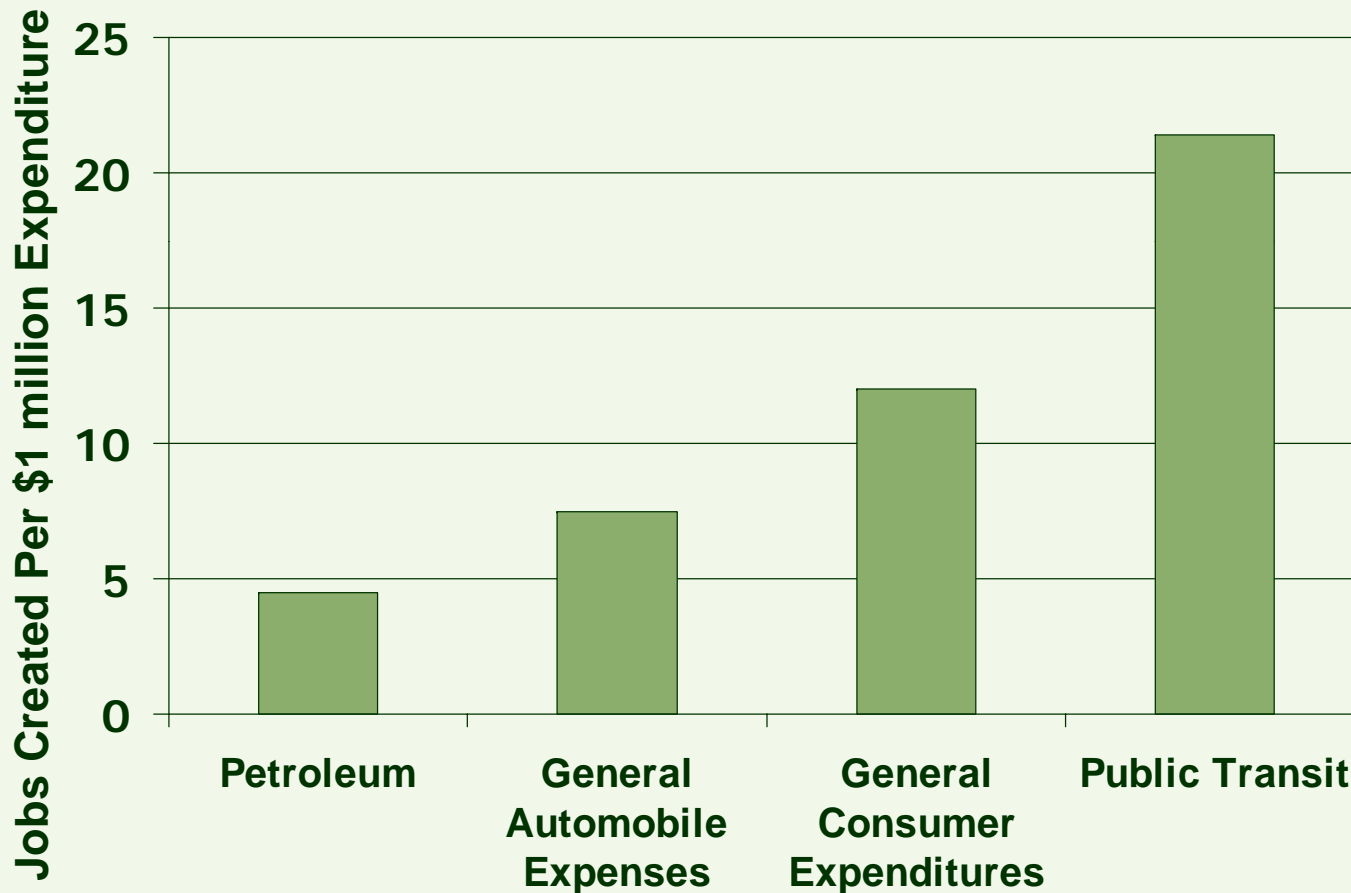
<b>Automobile</b>	<b>Public Transport</b>	<b>Non-motorized</b>
Roads \$500		
Parking \$1,000		Bikes: \$150
Fuel \$1,500	Fares \$500	Sidewalks/Paths: \$100
Vehicle <u>\$3,000</u>	Subsidies <u>\$100</u>	Shoes: <u>\$50</u>
<b>\$6,000</b>	<b>\$600</b>	<b>\$300</b>

# "A Heavy Load" Report

## Share of Income Spent on Housing and Transportation



# *Jobs Created*

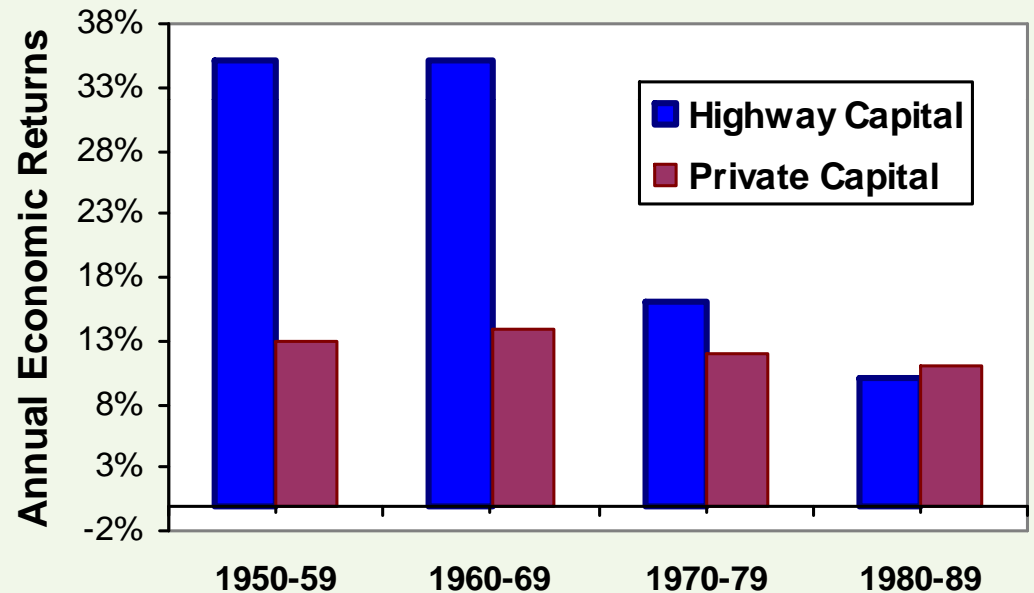


1,000,000 households in the region saving \$1,000 annually on vehicle expenses shifted to general consumer goods creates 6,000 additional regional jobs.



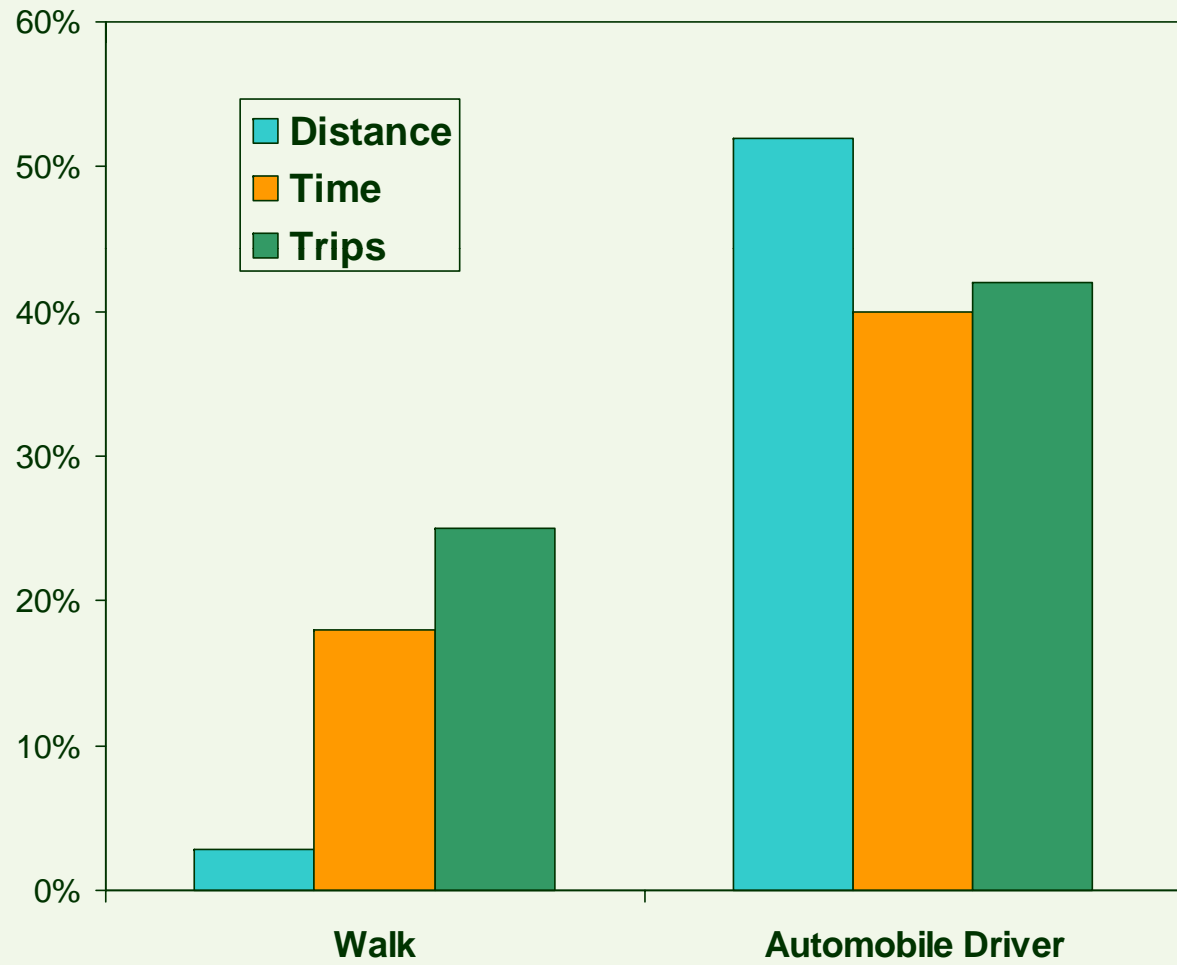
# *Value of Highway Expansion*

When major highway systems were being developed in the 1950s and 60s they provided high returns on investment. Now that the system is more mature, economic returns have declined.

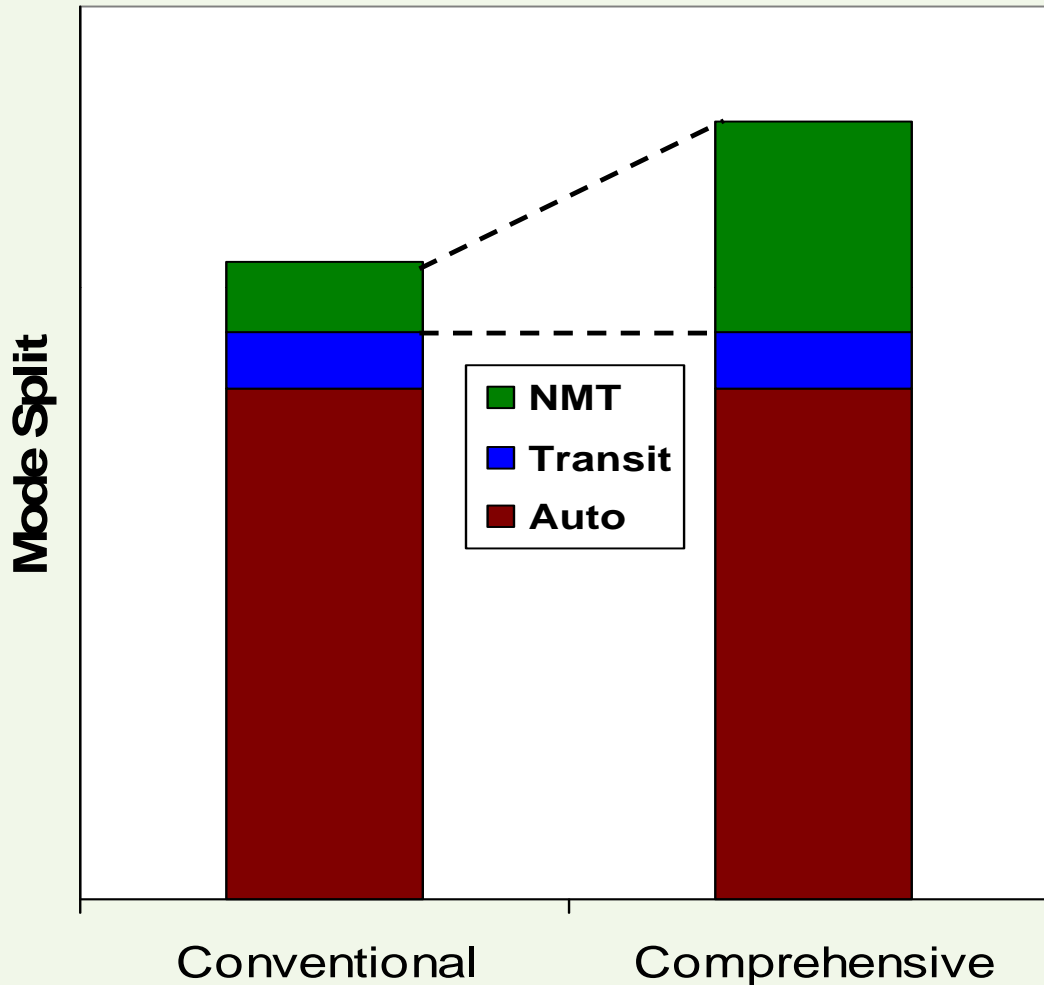


# *Travel Distances Versus Time*

Walking represents a small portion of travel distance but a large portion of travel time, particularly in urban areas



# *How Important is Walking?*



If, instead of asking, “What portion of trips are **only** by active transport? We ask, “What portion of trips involve **some** active transport?” the portion of active transport typically increases 2-6 times.

# *What Gets People Moving?*

Walking is a natural and essential activity. If you ask sedentary people what physical activity they will most likely to stick with, walking usually ranks first.



# *Equity*

A more diverse transportation systems helps achieve equity objectives:

- A fair share of public resources for non-drivers.
- Financial savings to lower-income people.
- Increased opportunity to people who are physically, socially or economically disadvantaged.
- Basic mobility.



# *Win-Win Transportation Solutions*

Market reforms justified on economic principles that help provide various economic, social and environmental benefits.

- Improved travel options.
- Incentives to use travel alternatives.
- Accessible land use.
- Policy and market reforms.



# *Mode Shifts*



How do we  
convince people  
who drive luxury  
cars to shift mode?

4/2/2008

# *Attracting Discretionary Riders*

- Quality service (convenient, fast, comfortable).
- Low fares.
- Support (walkable communities, park & ride facilities, commute trip reduction programs).
- Convenient information.
- Parking pricing or “cash out”.
- Integrated with special events.
- Positive Image.





# *Ridesharing*

Market studies suggest that a third of suburban automobile commuters would consider vanpooling, if it had:

- Flexibility.
- High Occupant Vehicle priority lanes and parking.
- Financial incentives.
- Integration with public transit.
- Employer support.



# *Employee Trip Reduction Programs*



Employers encourage employees to walk, bicycle, carpool, ride transit and telework rather than drive to work.

# *Transport Management Association*

Ride-On in San Luis Obispo County:  
*develop and implement creative solutions to  
transportation and mobility issues.*

## **It provides:**

- Shuttle bus services.
- School transportation.
- Special event transportation.
- Employee lunchtime shuttle.
- Employee Transportation Coordinator (ETC) contract services.
- Transport information and referral.
- Commuter baseline survey.
- Guaranteed/Emergency Ride Home.



# *Walking and Cycling Improvements*

- More investment in sidewalks, crosswalks, paths and bike lanes.
- Improved roadway shoulders.
- More traffic calming.
- Bicycle parking and changing facilities.
- Encouragement, education and enforcement programs.



# *School & Campus Transport Management*



Programs that encourage parents and students to use alternative modes to travel to schools, colleges and universities.

# *Distance-Based Pricing*



Motorists pay by the vehicle-kilometre, so a \$600 annual premium becomes 3¢/km and a \$2,000 annual premium becomes 10¢/km. This gives motorists a significant financial incentive to drive less, but is not a new fee at all, simply a different way to pay existing fees.

# *Location-Efficient Development*



- Locate affordable housing in accessible areas (near services and jobs, walkable, public transit).
- Diverse, affordable housing options (secondary suites, rooms over shops, loft apartments).
- Reduced parking requirements.
- Reduces property taxes and utility fees for clustered and infill housing.

# *Parking Management*



- More flexible parking requirements.
- Share parking spaces rather than having assigned spaces.
- Charge users directly for parking, rather than indirectly through taxes and rents.
- *Parking Cash Out* (employees who currently receive free parking are able to choose a cash benefit or transit subsidy instead.)



# *Parking Pricing and Cash Out*

Parking is never really free, consumers either pay directly or indirectly. Paying directly tends to be more fair and efficient, and typically reduces parking demand about 20%.



## *Example - Old Pasadena*

Parking meters installed to increase turnover and make spaces available to customers. A Parking Meter Zone (PMZ) was established. Revenues are invested in:

- Street furniture
- Trees
- Police patrols
- Better street lighting,
- More street and sidewalk cleaning
- Pedestrian facility improvements
- Downtown marketing



# *Reform Planning Practices*

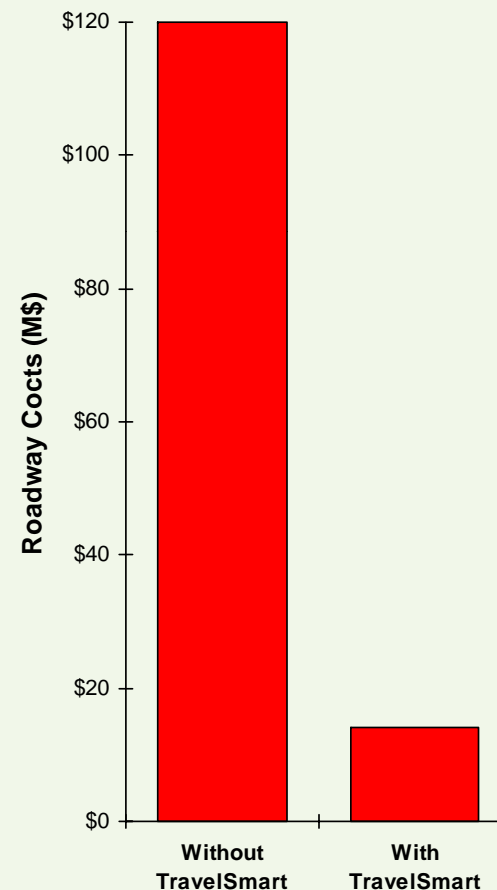
- *Least-cost planning:* equal funding for mobility management solutions.
- *Multi-modal planning:* create a diverse and integrated transportation system.



# *Kamloops TravelSmart Program*

**Reduces planned road expenditures by 75%, reduces pollution and improves travel options. Consists of the following:**

- City's official plan favors compact development.
- Improved public transit-increased frequency of service to outlying communities.
- Additional cycle routes and cycling initiatives.
- Promotional programs-workshops and seminars in schools.



# *Smart Growth (Density, Design, Diversity)*

- More **compact**, infill development.
- **Mixed** land use.
- Increased **connectivity**.
- Improved **walkability**.
- **Urban villages**.
- Increased transportation **diversity**.
- Better parking **management**.
- Improved **public realm**.
- More **traffic calming** and speed control.



# *Street Connectivity*

## **Comparing Distances**

1.3 miles

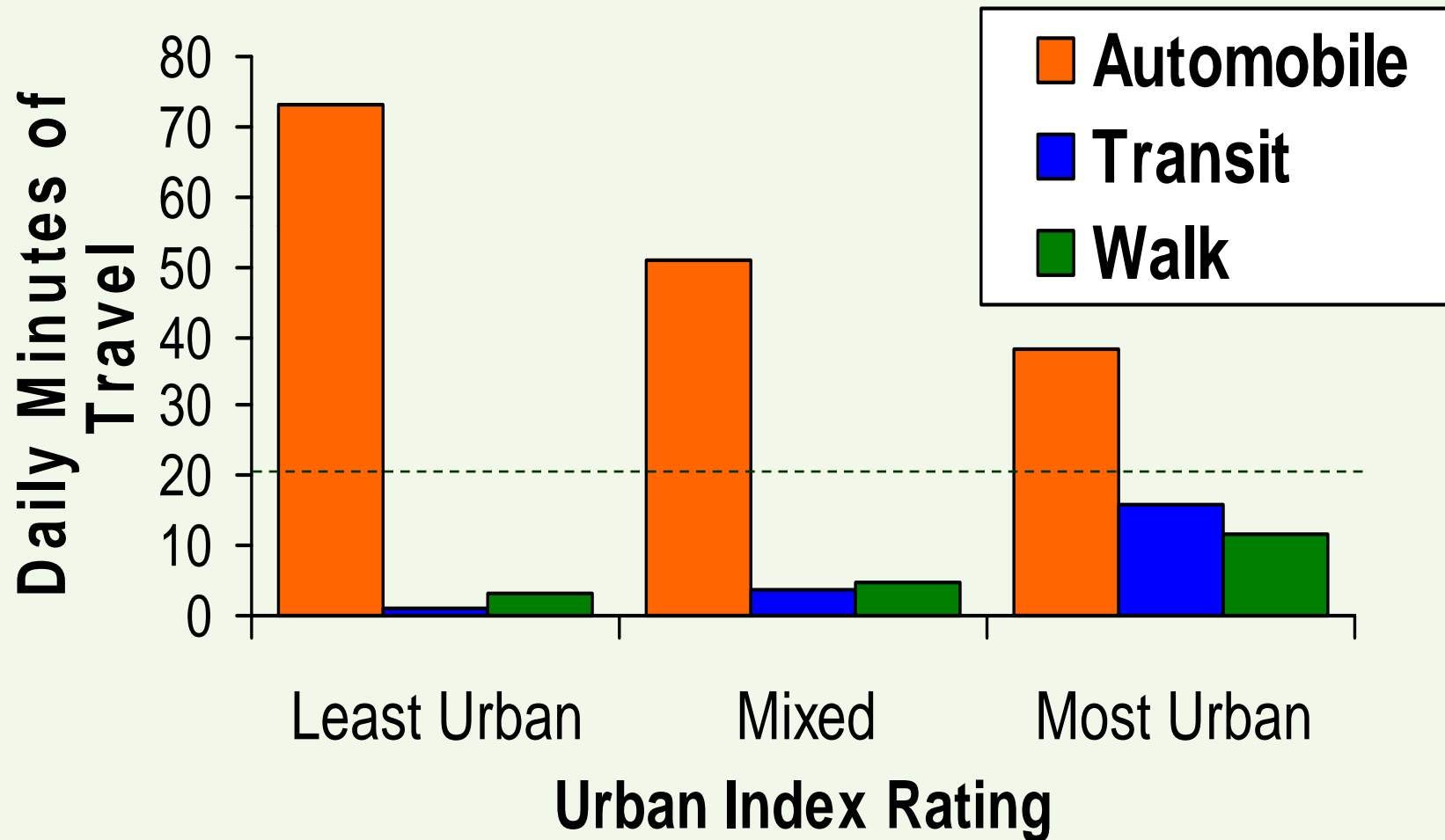
vs.

0.5 miles



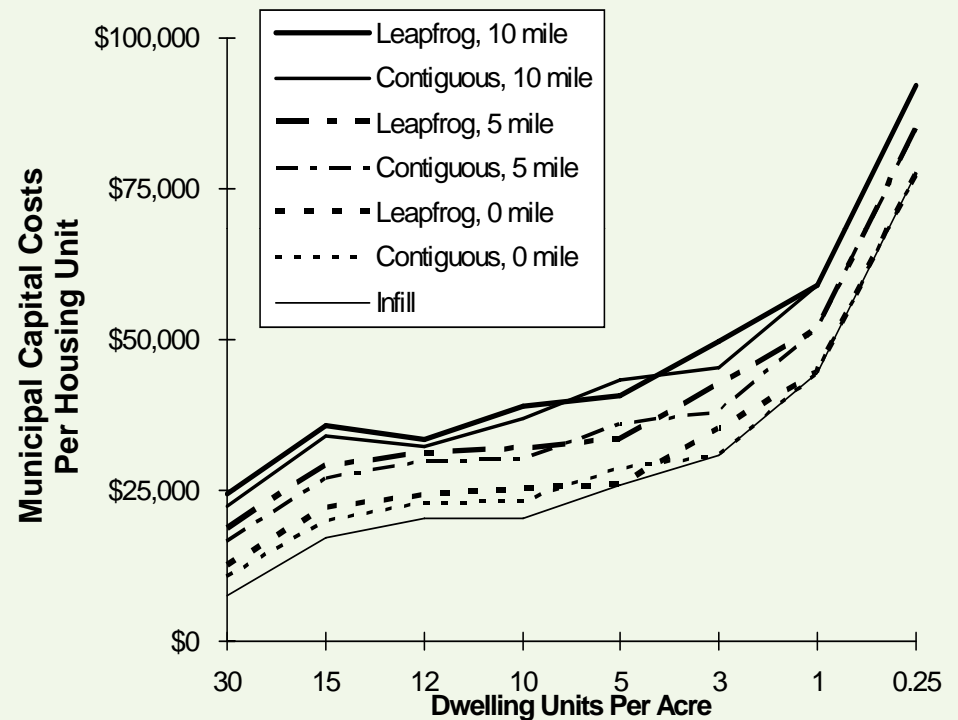
Images are same scale, approximately 1 sq mi.

# *Land Use Impacts On Travel*



# *Sprawl Is Costly*

- Increased infrastructure and public service costs.
- Reduces housing options (particularly multi-family)
- Reduced travel options.
- Increased transportation and delivery costs.
- Environmental costs.



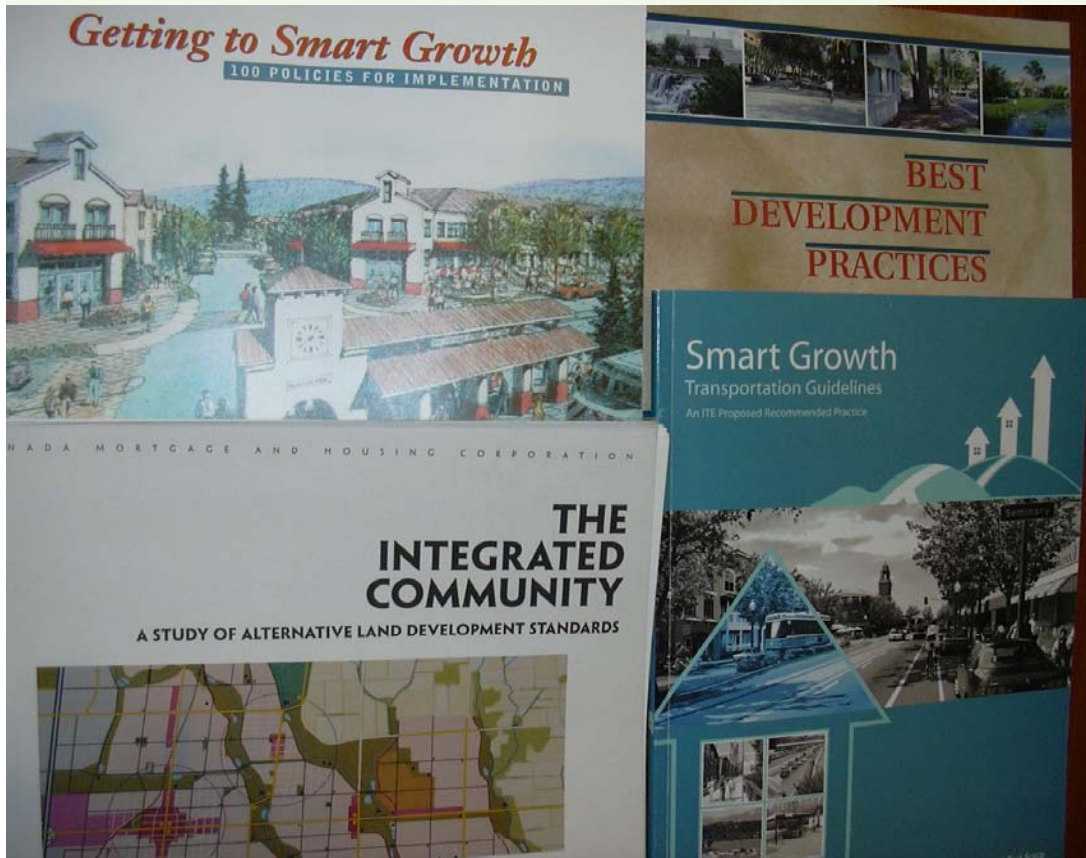


## *Example – Lancaster, CA*



Development fees calculated by civil engineering firm based on actual costs. Fees for a typical house located near the city edge are \$5,500, but increase to \$10,800 if located a mile away. Shifted development to smarter growth locations.

# *Supported by Professional Organizations*



- Institute of Transportation Engineers.
- American Planning Association.
- American Farmland Trust.
- Federal, state, regional and local planning and transportation agencies.
- International City/County Management Association
- National Governor's Association
- Health organizations.
- And much more...

## *Example: Malahat Highway*

Several options are being considered for addressing congestion problems on the Malahat highway north of Victoria, BC. Current proposals would cost half- to one-billion dollars, with annualized costs of \$30 to \$60 million.



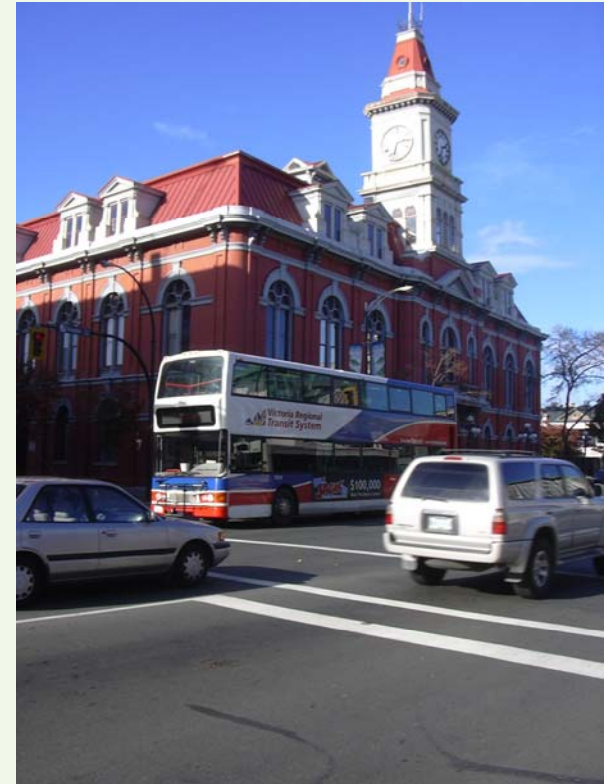
# *Malahat Improvement Options*

	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>
	<b>Widen Highway</b>	<b>Saanich Inlet Bridge</b>	<b>Rail Service</b>	<b>Bus/vanpool and TDM</b>
Annualized capital costs (millions)	\$40	\$50	\$12	\$1
Incremental annualized operating costs (millions)	\$2	\$4	\$3	\$1
Total annualized cost (millions)	\$42	\$54	\$15	\$2

# *Bus/Vanpool and TDM*

- Bus service: 20-minute headways.
- Bus fares: \$3-8 each way, depending on distance.
- Vanpool subsidy: 20% subsidy (\$80 per month)
- Commute trip reduction programs covering a third of commuters.
- HOV priority saves 3-5 minutes per trip.
- Targeted marketing along corridor.
- Encourage parking cash out and Pay-As-You-Drive insurance.
- Improve user information services.

**Results: 10-20% shift**



# Comparing Benefits

Planning Objectives	Widen Highway or Bridge	Quality Public Transit & TDM
Reduce congestion (direct/downstream)	✓/x	✓
Parking cost savings	x	✓
Consumer cost savings	x	✓
Better mobility options		✓
Traffic safety	✓/x	✓
Reduce pollution	x	✓
Energy conservation	x	✓
land use objectives	x	✓
Improved fitness & health		✓

✓ = supports objective

x = contradicts objective

# *Aggressive Program*

- Bus service: 10-minute headways, with express service.
- Bus fares: \$2 to Duncan, \$3 to Nanaimo
- Vanpool subsidy: 50% subsidy
- Enhanced vanpool services: part-time options, synchronized to meet transit, luxury vans, etc.
- Commute trip reduction covering 60% commuters.
- HOV priority saves 10+ minutes per trip.
- General and personal marketing.
- Priced parking, parking cash out, and PAYD insurance.
- \$2 per peak-period trip road user fee.
- Aggressive tourist transport management.
- Real-time user information.



**Results: 15-30% shift without road pricing, 20-40% with.**

# *Benefits*

## ***Economic***

- Reduces congestion, improves mobility.
- Reduced road & parking facility costs.
- Consumer cost savings.
- Supports regional economic development.

## ***Social***

- Improved travel options for non-drivers.
- Improved safety and fitness.

## ***Environmental***

- Energy conservation and pollution reduction.
- Reduced land consumption.





# *Motorists Benefit Too*

Mobility Management strives for balance. It is no more “anti-car” than a healthy diet is anti-food. Motorists have every reason to support it:

- Reduced traffic and parking congestion.
- Improved safety.
- Improved travel options.
- Reduced chauffeuring burden.
- Positive incentives.
- Often the quickest and most cost effective way to improve driving conditions.





**“Understanding Smart Growth Savings”**

**“The Future Isn’t What It Used To Be”**

**“If Health Matters”**

**“Online TDM Encyclopedia”**

**and more...**

**[www.vtppi.org](http://www.vtppi.org)**