

The Region

VOLUME 47 2008

ANNUAL REVIEW OF
TRANSPORTATION ISSUES
IN THE WASHINGTON
METROPOLITAN REGION



Transportation and
the Challenges of
Growth



What is the TPB?

Transportation planning at the regional level is coordinated in the Washington area by the National Capital Region Transportation Planning Board (TPB). The TPB is staffed by the Department of Transportation Planning of the Metropolitan Washington Council of Governments (COG).

Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia, and the District of Columbia, local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies.

The TPB was created in 1965 by local and state governments in the Washington region to respond to a requirement of 1962 highway legislation for establishment of official Metropolitan Planning Organizations (MPOs). The TPB became associated with the Metropolitan Washington Council of Governments in 1966, serving as COG's transportation policy committee. In consultation with its technical committee, the TPB is responsible for directing the continuing transportation planning process carried on cooperatively by the states and local communities in the region.

Metropolitan Washington Council of Governments 2007

COG Board Chair
Vincent C. Gray

COG President
Redella S. Pepper

COG Executive Director
David Robertson

COG Department of
Transportation Planning Director
Ronald F. Kirby

TPB Members 2007*

Officers

Chair
Catherine Hudgins
Fairfax County

First Vice Chair
Phil Mendelson
District of Columbia

Second Vice Chair
Andrew M. Fellows
City of College Park

Board Members

Timothy Lovain
City of Alexandria

Christopher Zimmerman
Arlington County

D. Michael Lyles
City of Bowie

Edith J. Patterson
Charles County

Yvette Alexander
District of Columbia

Muriel Bowser
District of Columbia

Harriet Tregoning
District of Columbia

Patrice M. Winter
City of Fairfax

Linda Smyth
Fairfax County

David Snyder
City of Falls Church

Charles A. Jenkins
Frederick County

Paul Smith
City of Frederick

Stanley Alster
City of Gaithersburg

Rodney M. Roberts
City of Greenbelt

D. M. "Mick" Staton, Jr.
Loudoun County

Harry J. Parrish, II
City of Manassas

Frank Jones
City of Manassas Park

Arthur Holmes
Montgomery County

Michael Knapp
Montgomery County

David C. Harrington
Prince George's County

Haitham A. Hijazi
Prince George's County

Michael C. May
Prince William County

Robert Dorsey
City of Rockville

Kathryn Porter
City of Takoma Park

William A. Bronrott
Maryland House of Delegates

Jennie Forehand
Maryland Senate

Thomas D. Rust
Virginia House of Delegates

Patricia S. Ticer
Virginia Senate

Samuel F. Minnitte, Jr.
Maryland DOT

Jo Anne Sorenson
Virginia DOT

Nat Bottigheimer
Washington Metropolitan Area
Transit Authority

Ex-Officio Members

Mark R. Kehrl
Federal Highway
Administration

Deborah Burns
Federal Transit Administration

James Bennett
Metropolitan Washington
Airports Authority

John V. Cogbill, III
National Capital Planning
Commission

John Parsons
National Park Service

Robert Werth
Private Providers Task Force

*List reflects membership as of October 2007.

Contents

The Region 2008 **Transportation and the Challenges of Growth**

Facing the Pressures of Growth **3**
By Catherine Hudgins, 2007 TPB Chair

Toll Roads Move onto the **4**
Regional Agenda
In a region where most of the highways are free but transportation revenues are tight, it seems that toll roads are finally on the regional agenda.

Land Use and Transportation: **9**
Getting Down to the Local Level
By providing technical assistance to neighborhood-level planning efforts, the TPB's Transportation/Land-Use Connections (TLC) Program is helping to address local concerns about the impacts of growth.

Driving Toward Climate Change **15**
TPB studies are showing that we cannot reverse anticipated increases in transportation-related greenhouse gases unless we find ways to dramatically reduce the consumption of carbon-based fuels.

In Brief **21**

- Serving the Transportation-Disadvantaged
- Commuting Habits Documented in New Study
- Dealing With the "Ripple Effects" of Incidents
 - Involving the Public at Many Levels
 - TPB Surveying 10,000 Households
- Pedestrian Safety Campaign Expanded

Managing Editor: John Swanson
Design: Carla Badaracco Design
and Lloyd Greenberg Design

The Region is published by the
Metropolitan Washington
Council of Governments
777 N. Capitol St., N.E., Suite 300,
Washington, D.C. 20002-4239;
(202) 962-3200.

This publication was funded, in part, by
grants from the District of Columbia
Department of Transportation, the
Maryland Department of Transportation,
the Virginia Department of
Transportation, the Federal Highway
Administration and the Federal Transit
Administration. Copyright 2008.



Facing the Pressures of Growth



By Catherine Hudgins, 2007 TPB Chair

In the next 25 years the Washington metropolitan region is forecast to grow by 1.6 million people. That's like adding the City of Philadelphia or the entire region surrounding Columbus, Ohio to our existing population of 5 million. Where will all these people live and work? How will they get around?

As 2007 chair of the National Capital Region Transportation Planning Board, I am pleased to be part of a regional team that is asking these tough questions and trying to promote solutions to the challenges of growth. We are looking for ways to reduce our dependence on driving. We are supporting and celebrating planning efforts that make communities more livable and walkable. And we are seeking to expand the availability of transportation options, including increased bus service, light and heavy rail, new toll roads, bicycle lanes and sidewalks.

The impacts of these measures might not always be immediately apparent. When we make transportation improvements for people with disabilities, we're actually tak-

"We are looking for ways to reduce our dependence on driving."

ing steps that will benefit us all as we grow older. When we work to encourage pedestrian safety and walkable communities, we're promoting the most fundamental mode of transportation that nearly all of us use—walking. When we talk about bringing jobs and housing closer together, we're actually talking about cutting down on driving, which will be good for the environment.

Although our region is diverse and there is no "silver bullet" solution to our transportation challenges, I do believe that the things we hold in common are more numerous than our differences. Through the Transportation Planning Board and the Council of Governments, I look forward to continuing our regional search for common ground and shared vision.

1

Toll Roads Move Onto the Regional Agenda



In a region where most of the highways are free and transportation revenues are tight, it seems that toll roads are finally on the regional transportation agenda.

Since 2004, three new toll facilities have been included in the TPB's Constrained Long-Range Plan and are now slated for construction. More toll projects could be on the way.

Regional planners have not only been looking at individual toll projects. In recent years, the Transportation Planning Board has conducted a regionwide "what if" study that looked at the effects of adding value-priced facilities to nearly all the highways in the Washington metropolitan area.



TRANSURBAN

Virginia Adds More **HOT Lanes** to the Region's Plan

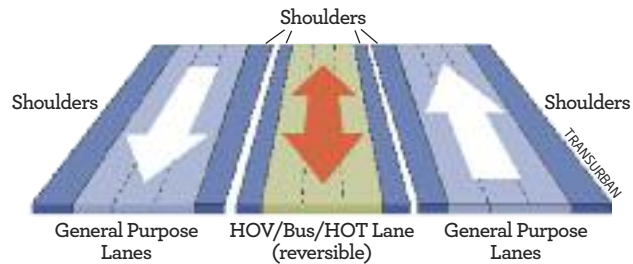
If the TPB's Constrained Long-Range Plan is a statement of the region's funding commitments, then toll projects—or more specifically “value priced lanes”—certainly rank high as regional priorities. Three of the ten most expensive projects in the CLRP are toll lane projects (see map on page 6). These projects include HOT (high occupancy/toll) lanes on the Beltway and on I-95/I-395 in Virginia, and the Intercounty Connector in Maryland.

The newest toll project, added to the CLRP in 2007, is on I-95/I-395 in Northern Virginia. The project will add HOT lanes to 36 miles of highway stretching from Eads Street in Arlington to Garrisonville Road in Stafford County. According to figures released in 2008, the Virginia Department of Transportation expects the project to cost \$902 million. It will be completed in 2010. The I-95/I-395 project will reconfigure the existing HOV facility from two to three lanes and convert those lanes to HOT lanes.

HOT lanes combine features of toll roads and carpool lanes. For the Virginia projects, carpools with three or more occupants will use the new HOT lanes free of charge. Other vehicles may use the facility by paying an electronic toll. Tolls will vary based on time of day, day of the

Northern Section: Interstates 95/395 HOV/Bus/HOT Lanes

Eads Street (Arlington County) south to
Dumfries Road (Prince William County)



The Region's Long-Range Transportation Plan

The Constrained Long-Range Plan (CLRP) is the official name of the Washington area's long-range transportation plan. The CLRP provides a list of all the projects that the region's transportation officials—including the state departments of transportation and the Metro system—believe they can and will fund over the coming decades. Because the CLRP is financially constrained, it is in fact a statement of the region's transportation priorities.

The TPB updates the CLRP every year, along with approving a new Transportation Improvement Program (TIP), which is a six-year, more detailed subset of the CLRP. All regionally significant projects must be included in the CLRP and TIP in order to receive federal funding.

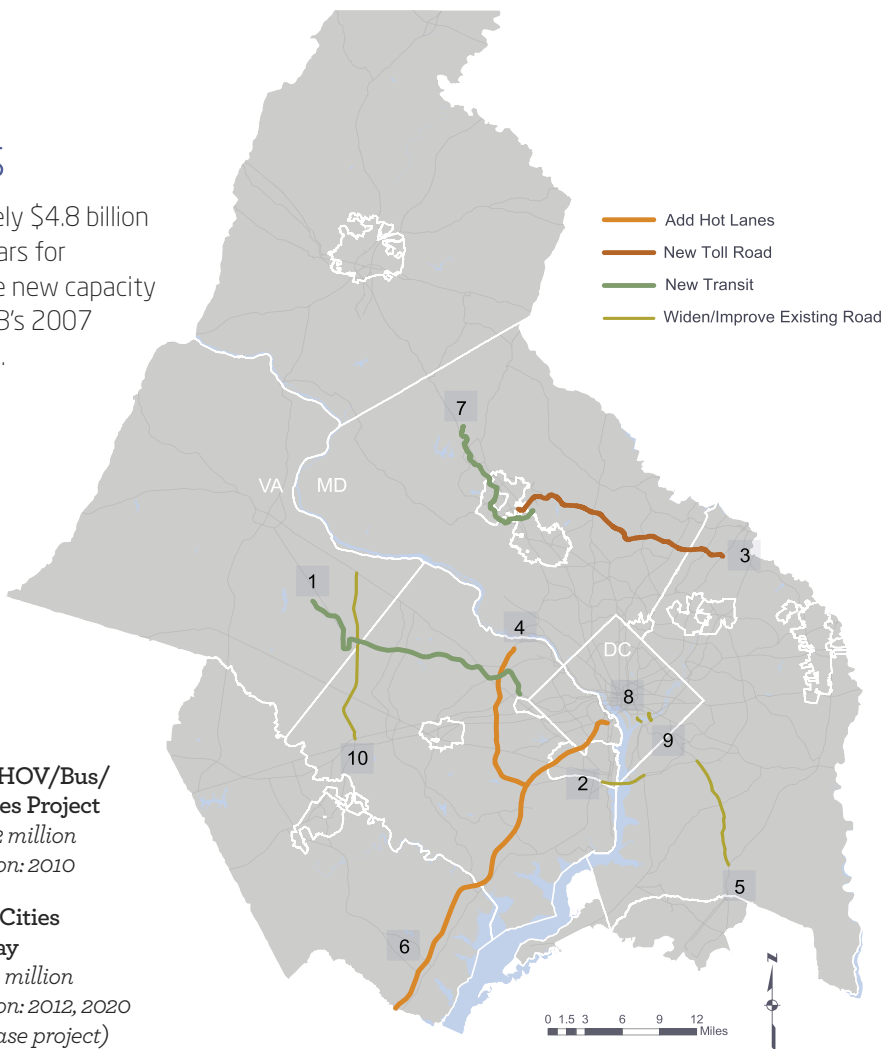
The Region's Top 10 Transportation Projects

The TPB estimated in 2006 that approximately \$4.8 billion per year will be available over the next 25 years for transportation spending. Listed below are the new capacity projects with the highest pricetags in the TPB's 2007 Constrained Long-Range Transportation Plan. Numbers 3, 4 and 6 are toll projects.

1. **Dulles Corridor Rapid Transit**
Cost: \$5 billion
Completion: 2011, 2015
(multi-phase project)
2. **Woodrow Wilson Bridge**
Cost: \$2.6 billion
Completion: 2009, 2011
(multi-phase project)
3. **Intercounty Connector**
Cost: \$2.5 billion
Completion: 2012
4. **Capital Beltway HOT Lanes Project**
Cost: \$1.6 billion
Completion: 2013
5. **MD 5, Branch Avenue, Upgrade & Widen**
Cost: \$981 million
Completion: 2011, 2030
(multi-phase project)

6. **I-95/395 HOV/Bus/HOT Lanes Project**
Cost: \$882 million
Completion: 2010
7. **Corridor Cities Transitway**
Cost: \$871 million
Completion: 2012, 2020
(multi-phase project)
8. **South Capitol Street Corridor with Frederick Douglas Memorial Bridge**
Cost: \$823 million
Completion: 2015

9. **11th Street Bridge Reconstruction**
Cost: \$645 million
Completion: 2011
10. **VA 28, Upgrade & Widen**
Cost: \$408 million
Completion: 2010, 2015, 2020
(multi-phase project)



week and level of congestion in order to maintain free-flow conditions. The project will create or modify a number of connections to the existing HOV lanes to improve access to the HOT lane system for HOV and transit users.

The I-95/I-395 project features an enhanced transit plan including new bus routes and increased bus frequency. New bus accommodations will be added, including bus-only ramps in and out of the Pentagon, a bus-only access ramp at Seminary Road and an in-line bus station near the Lorton VRE train station. New park and ride facilities will be added with a total

of 3,000 parking spaces. The total cost of the Transit Service Plan is \$390 million, including capital and operating costs.

The I-95/I-395 project will be the second HOT lanes facility approved for the region. In 2005, the TPB's long-range plan was updated to include HOT lanes on 15 miles of the Capital Beltway in Northern Virginia.

The new HOT project came under scrutiny at the TPB during the update of the long-range plan in 2007. A number of local officials and citizens emphasized the importance of high-quality bus service on the new HOT lanes.



TRANSURBAN

“What If” Study Looks at Priced Lanes

Even while individual toll projects move forward, a major new TPB study has taken the regional discussion on tolling a step further by asking: What if we added toll lanes to nearly all the region’s major highways?

The new TPB study, released in March 2008, is titled “Evaluating Alternative Scenarios for a Network of Variably Priced Highway Lanes in the Metropolitan Washington Region.” It analyzes the potential effects of pricing highway use in the Washington region and outlines several different scenarios for adding new priced lanes, pricing *existing* highways, and *enhancing bus services*. The study was funded by the Federal Highway Administration of the US Department of Transportation, and was overseen by the TPB’s Value Pricing Task Force.

Three different scenarios of variably priced lane networks were developed and analyzed:

- A. The “Maximum Capacity” scenario added two variably priced lanes (VPLs) to each direction of most of the region’s freeways. One VPL was added to each direction of major arterials outside the Capital Beltway. Existing high-occupancy vehicle (HOV) lanes were converted to VPLs, and direct access/egress ramps were added at key interchanges in the VPL network.
- B. The “DC Restrained” scenario applied variable pricing to *existing* freeways and selected arterial lanes in the District of Columbia instead of adding new VPL capacity as in the “Maximum Capacity” scenario. Outside DC, this scenario would add the same new capacity as in the “Maximum Capacity” scenario.
- C. The “DC and Parkways Restrained” scenario further enhances the “DC Restrained” scenario by applying variable pricing to the existing capacity on the region’s parkways (Baltimore-Washington, George Washington Memorial, Rock Creek, Clara Barton, and Suitland).

According to the TPB’s goals for variably priced lanes, which were adopted in 2005, “transit bus service should be an integral part of a system of variably priced lanes, beginning with project planning and design, in order to move the maximum number of people, not just the maximum number of vehicles.”

TPB members also expressed concerns about whether adequate shoulder widths were being maintained to insure safety. Others noted the importance of coordination between the District of Columbia and Virginia to address the potential choke point that could be created at the 14th Street Bridge where traffic from the new HOT lanes will flow into Washington.

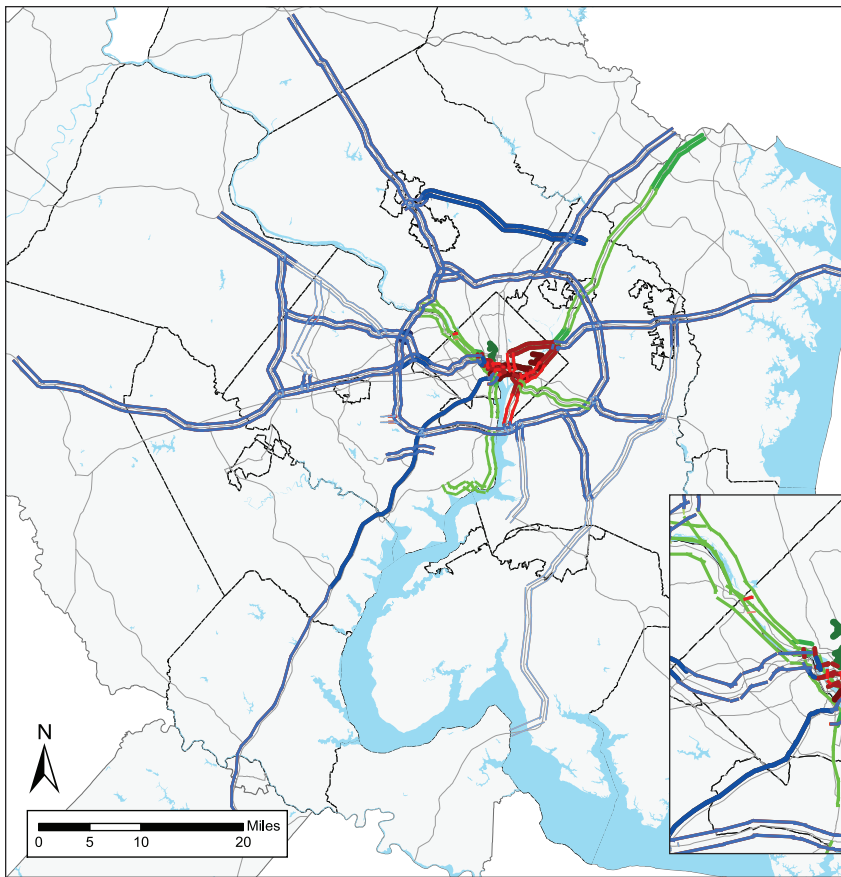
These concerns were balanced, however, by the perceived benefits of the project. “When we first took a look at HOT lanes about a decade ago, the concept received a lot of negative reactions,” said Falls Church Councilmember Dave Snyder. “Happily, I think we’ve reached a point today where this is a very serious option.”

Noting Virginia’s continuing transportation revenue shortfall, Virginia State Senator Patsy Ticer also spoke in support of the project in April 2007. “I think there is enormous potential with this project for addressing one of the most important issues facing our region—congestion and the problems it creates for all for us, for our economy...for everything we do,” she said.

The TPB approved the 2007 CLRP and the FY2008-2013 TIP, which included the I-95/I-395 HOT lanes project, on January 16, 2008.

The I-95/I-395 project features an enhanced transit plan including new bus routes and increased bus frequency.

Full Potential Extent of Value Pricing Network



Number of Value Priced Lanes (VPLs)		
Scenario A	Scenario B	Scenario C
1	1	1
2	2	2
3	3	3
4	4	4

The TPB's study of variably priced lanes analyzed three different scenarios that would add new toll lanes, put tolls on existing highways and enhance bus services.

The results of the analysis demonstrated that toll rates would need to vary significantly by segment, direction and time-of-day in order to maintain free-flowing conditions on the new networks of toll lanes. Toll rates would range from a low of 20 cents per mile to over \$2.00 per mile on the "Maximum Capacity" scenario, where all of the VPLs were either newly added lanes or conversions of existing HOV lanes. In the "DC Restrained" and "DC and Parkways Restrained" scenarios, toll rates were significantly higher on some segments, which was due in part to the fact that a significant percentage of lane miles in those scenarios (43-percent and 56-percent respectively) were existing lanes as opposed to newly added lanes.

The analysis was designed to elicit discussion, not to provide conclusive answers. "This is not a proposal, it's a 'what if' study that provides very interesting insight into the implications of tolling for our region," said Arlington County Board Member Chris Zimmerman, Chairman of the TPB Value Pricing Task Force.

High-quality public transit was integral to the scenario analysis—a point that several TPB mem-

bers strongly emphasized. "The key thing that I hope that we do in the next step is to really look at how we create a realistic, affordable alternative for people who now must drive because they have no realistic alternative," said Falls Church Councilmember David Snyder.

Some members expressed concerns about the potential spillover of traffic onto local roads if major highways were tolled. Referring to experience from the Dulles Greenway, Loudoun County Supervisor Lori Waters said "our neighborhood streets are a whole heck of a lot worse off today because of the Greenway tolls."

The TPB has had an active interest in variably priced highway lanes since 2003 when the TPB, in conjunction with the Federal Highway Administration and the region's three state departments of transportation, sponsored a conference on value pricing that catalyzed regional discussion on the opportunities for developing variably priced lanes and implementing other pricing strategies. Following the conference, the TPB created its Task Force on Value Pricing to examine how value pricing could benefit the region.



2

Land Use and Transportation: Getting Down to the Local Level



By providing technical assistance to planning efforts at the neighborhood-level, the TPB's Transportation/Land-Use Connections (TLC) Program is helping to address local concerns about the impacts of growth.



On a regional level, community leaders and citizens often agree with broad goals related to transportation and land-use. Yes, they acknowledge, we need to promote mixed-use, compact development in regional activity centers. Yes, we need to increase the availability of various transportation choices and connections.

But accomplishing these goals is another matter. Many policies that seem to make sense on a regional scale face considerable skepticism and opposition during implementation on the ground. At the local level, planners and citizens alike will often comment that “the devil is in the details.”

For more than a decade, regional leaders at the TPB and COG have promoted regional policies to address the challenges of growth. Last year, the TPB established the Transportation/Land-Use Connections (TLC) program to help encourage the implementation of these policies at the local level.



LARRY LEVINE, WMATA



JOHN DEAMOND

The Challenges of Regional Growth

The origins of the TPB's transportation/land-use coordination efforts can be traced back to the TPB Vision, the regional transportation policy framework adopted in 1998. The Vision identified regional goals for our future transportation system and called for a decrease in driving (measured as per capita "vehicle miles of travel" or VMT), an increase in transit use, and the promotion of regional activity centers.

In recent years, the TPB's Regional Mobility and Accessibility Scenario Study has shown that certain actions, based on the goals of the Vision, can make a positive impact on future travel conditions. These actions include locating jobs and housing closer together, promoting development closer to transit stations, and improving multimodal transportation options.

Community leaders and the public generally understand and often support these principles. But during TPB outreach activities in recent years, citizens also expressed valid apprehensions about the local impacts of these land-use and transportation policies.

At public forums on the TPB's Scenario Study, citizens have reminded leaders that "we need to do density right." Facing increased densities and other growth pressures, many people are concerned about traffic impacts, affordable housing or changes in their community's identity. In some cases, citizens and planners want to know what small improvements—such as streetscaping, sidewalks or lighting—can make a good project even better.

By providing technical assistance to neighborhood-level planning efforts, the TPB's Transportation/Land-Use Connections (TLC) Program helps address some of these concerns. The program facilitates proactive, innovative solutions to local challenges, and shares information among local leaders, planning staff and other stakeholders throughout the region.

The TLC Program also seeks to celebrate and share the hundreds of local success stories that have already occurred across this region as communities have implemented transit-oriented development, walkable communities and other transportation/land-use solutions.

Providing Community-Level Assistance

The TPB launched the TLC Program at the beginning of 2007, and by mid 2008 the program will have completed 22 technical assistance projects for jurisdictions across the metropolitan area.

The program currently includes two components:

- 1) *The TLC Clearinghouse* (www.mwco.org/tlc) is a web-based source of information about transportation/land-use coordination, including regional and national experience with transit-oriented development and other key strategies.
- 2) *TLC technical assistance projects* use pre-qualified consultants to provide planning support to TPB member jurisdictions. Projects may include a range of services, such as public participation and visualization; streetscape design and roadway standards; pedestrian and bicycle planning; public space/aesthetics; mixed-use market analysis; transit demand analysis; stakeholder identification and cooperation; zoning and design standards revisions; parking management planning; and other services.

Scenario Outreach

The TPB conducted outreach forums on the Regional Mobility and Accessibility Scenario Study between 2004 and 2007. At these interactive events, participants were asked to consider various “what if” regional growth scenarios in which land would be used more efficiently, public transit would be extensively expanded, and tolls would be added to many of the region’s roads.

The outreach found that many citizens appear to broadly agree with the premises and solutions underlying the scenario study, including the benefits of shortening the distances between jobs and housing, and the value of expanding public transit. But many of these same individuals expressed concerns about continuing challenges that might be linked to the study’s scenarios, such as housing affordability, traffic impacts and crowding on public transit.

A staff report on the outreach, released in July 2007, noted that many forum participants were concerned that government would not provide adequate infrastructure, especially road and transit capacity, to accommodate a strategy of concentrated growth. Some participants feared that the expected detriments to their local quality of life could outweigh the potential benefits of such a regional strategy. Audiences also talked about the need for a commitment on the part of local jurisdictions to provide a range of housing options in areas of concentrated growth.

The outreach summary identified a number of opportunities for regional action, including the need to develop a cohesive message about regional challenges related to growth, advocacy for more funding for transportation improvements, more tools for localities to “do density right,” and an improved process for prioritizing transportation projects in the region.

Based on the findings of the outreach summary and recommendations from the TPB’s Citizens Advisory Committee to more directly link the scenarios with the TPB’s planning process, the TPB in the fall of 2007 formed the Scenario Study Task Force to guide future scenario planning activities.



Takoma/Langley Crossroads Pedestrian Safety Study

As a station location for the proposed Purple Line transitway, the intersection of University Boulevard and New Hampshire Avenue is expecting some big changes in the coming years. But the site has plenty of immediate safety concerns as well. A melting pot of different cultures, Langley Park is a vibrant hub of pedestrian activity in spite of its present physical environment, which can be quite hostile to people who are not in cars. As Prince George's and Montgomery counties prepared to launch a multi-year sector planning effort in 2007, the jurisdictions turned to the TLC Program to get a focused examination of pedestrian safety needs.

Toole Design Group was tapped to develop short-, mid- and long-term strategies to improve pedestrian and bicycle safety at the intersection. These recommendations ranged from locations for new traffic signals to longer-term suggestions for creating physical spaces that are well-connected, accessible and comfortable—places where walking will be treated as a primary transportation mode, not just something to tolerate.

The Takoma/Langley Crossroads TLC project won awards from the region's chapters of the American Planning Association and the American Society of Landscape Architects.



TLC projects are designed to help communities successfully meet the challenges that lie behind planning buzzwords such as “transit-oriented development” (TOD) and “complete streets.” More than half of the projects funded through the program have been intended to spur and enhance TOD, which seeks to take advantage of land near transit stations and thereby reduce automobile dependency. Several projects, including one at Prince George's Plaza, promote a “complete streets” approach to development, which recognizes that streets should be designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and bus riders of all ages and abilities.



Many communities working on small area plans or plans for specific transportation corridors have looked to the TLC program to provide niche assistance in their broader planning efforts. For example, a corridor study for South Washington Street in Falls Church identified transportation strategies and investments needed to facilitate the desired land-use vision for this corridor. The project addressed issues such as site access, on-street parking locations and pedestrian and transit improvements.

A number of TLC projects touch on high-profile issues. A study for the District of Columbia DOT is developing recommendations for performance-based parking regulations. Three projects—in Frederick and Prince William counties and in Bethesda—are helping communities prepare for the transportation impacts of military base expansions arising from the federal BRAC (Base Realignment and Closure) changes.

Overall, the program has been very well received. Past participants have emphasized the value of the program's rapid-response approach to technical assistance. The program produces tailored, meaningful results that do not get bogged down as longer studies sometimes do. In addition, participants have noted the program's value in bringing stakeholders together in a way that might not have occurred otherwise. The process of participation in a regional technical assistance program has encouraged recipients to think regionally and include a variety of partners in their planning processes.

TLC projects help communities successfully meet the challenges that lie behind planning buzzwords such as “transit-oriented development” (TOD) and “complete streets.”



UMAIR BADELU

TPB leaders have emphasized that the end-products of the TLC Program should not be viewed simply as discrete reports. Rather, the projects funded through the TLC Program are designed to fit into more extensive planning activities. In many cases, the “products” should be seen as the relationships that are enhanced when stakeholders are convened through a TLC project, or the issues and opportunities that are clarified and highlighted through focused, short-term technical assistance.

The TPB intends to expand the TLC Program in the future to provide modest increases in funding for individual projects. In addition, TLC resources will be used to develop regional “toolkits” to address such key implementation challenges as designing policies to bring development to activity centers (particularly affordable housing), and to address different perspectives on density and congestion at the regional and local levels.

In future phases, regional leaders at the TPB would like to use the program to promote the implementation of specific transportation projects that have been identified or highlighted through the TLC technical assistance projects. Funding for such projects might be identified through local and state programming processes or as part of the TPB’s 6-Year Transportation Improvement Program (TIP).

More broadly, the TLC Program is designed to be part of a larger strategy for encouraging community leaders to “think regionally and act locally” in their efforts to improve the coordination between transportation and land-use planning.

“Every jurisdiction in this region is already working hard on projects and policies that implement common-sense strategies identified through the TPB’s scenario study,” said Montgomery Council President Michael Knapp when he served as TPB chair in 2006 and spearheaded the establishment of the TLC Program. “At the TPB we want to provide support for these efforts, and help to put them into a regional context, in which good experiences can be shared and encouraged.”



Urban Road Standards in Charles County

Charles County’s vision for the Bryans Road Town Center and the Waldorf Sub-Area foresees denser, walkable communities with a mix of residential, commercial, and community amenities. But the missing link in the transformation for these areas has been the creation of a complete urban road network that increases connectivity for motorists, integrates transit, and is accessible to pedestrians and bicyclists. The County’s current road standards do not allow the flexibility to implement the type of road and streetscape design needed to transform these areas into compact, pedestrian-friendly areas.

The county turned to the TLC Program for technical assistance in the development of urban roads standards. The TLC consultant, Vanasse Hangen Brustlin, provided county staff with functional and thoroughfare type classifications for both existing and proposed roads in the St. Charles Urbanized Area according to context-sensitive design principles.

The technical assistance for the Charles County project produced an urban roadway classifications table and intersection plan figures that will be applied to future development in the recently rezoned urban districts of the St. Charles Urbanized Area.

TLC TECHNICAL ASSISTANCE PROJECTS

Fiscal Years 2007 and 2008

CORRIDOR



TOWN CENTER



NODES



AVERS SAINT GROSS

The TLC project for Manassas Park presented three strategies for developing a city core that would be more dense and more walkable. The three options were combined into a single “vision scenario.”

PILOT PHASE - FY 2007 (March - June 2007)

Langley/Takoma Crossroads Pedestrian Safety Study
Montgomery/Prince George's Counties

Recommendations on Urban Roads Standards
Charles County (St. Charles Urbanized Area)

Review of Automobile “Levels of Service” in Transit Station Areas
Fairfax County

Scoping Assistance for BRAC Impacts
Prince William County

Scoping Assistance for the Potomac Avenue Metro Station Area
District of Columbia

“Understanding Density” – Public Presentation on Density Issues
For Use in Multiple Jurisdictions As Requested

VDOT MULTIMODAL GRANT PROGRAM FUNDING (initiated fall 2007)

Bus Rapid Transit (BRT) Feasibility Study
Leesburg (Loudoun County)

Look Back at Rezoning Cases to Compare Projected and Actual Transportation Impacts
Fairfax County

Examination of Potential for Development Near the VRE Rail Station
Manassas Park

Corridor Planning on South Washington Street
Falls Church

Transportation Management Plan (TMP) Review
Alexandria

FY2008 ROUND (including additional funding through MDOT Technical Assistance Account)

“Multimodal Takoma!”— Development of a Multimodal Scorecard
District of Columbia

Recommendations for Performance-Based Parking Implementation
District of Columbia

Charrette on a Potential Pedestrian Link to the Bowie MARC Station
City of Bowie

Assessment of Pedestrian Crossing Options on East Street
City of Frederick

Assessment of BRAC Impacts at Fort Detrick
Frederick County/City of Frederick

Assessment of Potential and Current Transit Options
City of Greenbelt

Recommendations for the Bethesda Circulator
Bethesda Urban Partnership (Montgomery County)

Identification of Appropriate TOD Strategies for the Landover Metro Station
Prince George's County MNCPPC

Recommendations for “Complete Streets” in the Prince George's Plaza Transit District
Prince George's County MNCPPC

Development of Transportation and Land-Use Strategies for the Yorkshire Corridor
Prince William County

Recommendations for Process Improvements for Approving Parking for New Development
Arlington County

3

Driving Toward Climate Change

TPB studies are showing that we cannot reverse anticipated increases in transportation-related CO₂ emissions unless we find ways to dramatically reduce consumption of carbon-based fuels.

From the schoolroom to the boardroom, climate change has become a hot topic. Global warming, a phenomenon whose effects once seemed slow-moving and nearly imperceptible, is now considered an imminent threat. Human activity has been identified as the primary cause of the global spike in greenhouse gases, including carbon dioxide (CO₂), which is warming the planet at an alarming rate. Our auto-dependent lifestyles are clearly implicated.

For the Washington region, the TPB has forecast continuing and substantial increases in vehicle emissions of CO₂ in the coming decades. Tougher fuel efficiency standards, new technologies, and reductions in vehicle travel will all be needed to achieve significant reductions in CO₂ emissions from current levels.





The transportation sector is responsible for just under 30 percent of total human-related CO₂ emissions in the United States.

The Role of Transportation

The transportation sector is responsible for just under 30 percent of total human-related CO₂ emissions in the United States. Other contributors include power plants, heavy industry and agriculture.

Unlike pollutants that can be removed through catalytic converters and other common vehicle technologies, CO₂ is a “clean-burning” emission that is directly linked to how much fuel we burn, not how dirty the emissions are. One gallon of fuel produces approximately 8800 grams of CO₂.

The options for reducing transportation greenhouse gases are often categorized into three groups: 1) improvements in vehicle fuel efficiency; 2) reductions in the “carbon intensity” of fuel through the development of alternative fuels or vehicle technologies; and 3) reductions in vehicle travel combined with improved operational efficiency. All three categories offer essential contributions and it seems unlikely that any single approach will solve the problem of climate change.

Decision makers have paid considerable attention to fuel efficiency. In December 2007, the U.S. Congress enacted the first overhaul in federal fuel efficiency standards (known as Corporate Average Fuel Economy or CAFE regulations) in more than 30 years. The new law requires automakers to boost average fleetwide gas mileage to 35 miles per gallon by the year 2020.

The new vehicle standards will require manufacturers to sell a much larger share of fuel-

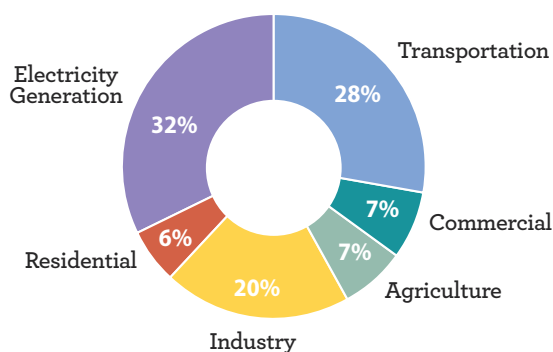
efficient vehicles, including hybrids and smaller cars. Ownership of hybrid vehicles in the Washington region has risen significantly in recent years, but nonetheless, total hybrid ownership in 2007 was less than half of one percent of total vehicles in the metropolitan area.

Greenhouse Gases and Global Warming

The greenhouse effect makes life on earth possible. Greenhouse gases—including water vapor, carbon dioxide and methane—trap heat from the sun and warm the planet. Without this greenhouse effect, the energy that warms the atmosphere would be released back into space and our planet would be frigid and uninhabitable.

Greenhouse gases come from natural and human sources. In the last hundred years, the human contribution to greenhouse gases has tremendously increased. The additional greenhouse gases that are caused by humans have increased the amount of heat trapped in the atmosphere. This extra heat is causing global warming.

US Greenhouse Gas Emissions by Sector



COG Climate Change Steering Committee, May 23, 2007

Federal Clean Air Requirements

Carbon Dioxide is not currently covered by Federal Clean Air standards, which focus on emissions that directly and immediately harm human health, including ground-level ozone (or smog) and fine particles. Under federal law, the TPB is required to show that its transportation plans and programs will conform to regional air quality goals for ozone and particulate matter.

Unlike CO₂, ozone and fine particles are expected to decline. TPB forecasts show that by 2030, the chemical compounds that form ozone (“precursors”) will go down substantially. Vehicle emissions of these ozone precursors—volatile organic compounds (VOCs) and nitrogen oxides (NO_x)—will decrease 87 percent and 61 percent, respectively. These anticipated declines are linked to a variety of emission controls and the gradual removal of highly polluting cars from the roads.

The new 35 mpg CAFE standards will make a significant reduction in anticipated carbon dioxide emissions. Before the new standards were enacted, the TPB forecast an increase of 38 percent in CO₂ levels in our region between 2005 and 2030. With the new CAFE requirements, CO₂ levels will only increase 8 percent. But simply slowing the rate of increase is not good enough. Most experts believe we need to find ways to make deep reductions in current CO₂ levels.

The second category of strategies for reducing transportation greenhouse gases is to develop alternative fuel technologies in which the intensity of carbon dioxide emissions are either eliminated or significantly reduced. Such technologies typically revolve around the increased use of biofuel-, electric- and hydrogen-powered vehicles.

Although they hold considerable promise, alternative fuels may not ultimately be as effective in reducing greenhouse gases as they first appear. Emissions reduction benefits may be offset by the carbon dioxide that is released when the fuel is produced. For example, while electric cars themselves may not release CO₂, the production of electricity by coal-fired power plants does. When these life-cycle factors are considered, some alternative fuels are more beneficial than others. For example, the production of cellulosic ethanol—which is made from wood, grasses, or the non-edible parts of plants—is expected to expend less CO₂ than the production of ethanol from corn.

The implementation of many of these beneficial technologies is still some years away. Meanwhile, the need to reduce CO₂ emissions is increasingly urgent.



The CO₂ challenge includes the question of how we can cut back on driving—an issue the TPB has long been grappling with.

Technological improvements that are currently available or are on the horizon will only partly address the CO₂ problem. The other key challenge is the continuing increase in driving, measured as “vehicle-miles traveled” or VMT.

“The more we drive, the more we burn fuel, the more carbon dioxide we produce,” said Ronald Kirby, Director of COG’s Department of Transportation Planning, when he presented the region’s first analysis of transportation-related emissions of carbon dioxide in July 2007.

The TPB forecasts that VMT is expected to increase 27 percent between 2005 and 2030. Even with vehicles that are more fuel-efficient (such as those meeting the new 35 mpg CAFE standards), the projected increase in VMT could well result in continuing increases in greenhouse gases.

So the CO₂ challenge must also include the

question of how we can cut back on the increase in driving—an issue the TPB has long been grappling with.

For more than a decade, the TPB’s official policy has called for a reduction in vehicle travel. A goal to reduce per-capita VMT was established in the TPB Vision, the regional transportation policy framework adopted in 1998. In recent years, the TPB’s scenario analysis has examined alternative growth scenarios with the goal of reducing driving in the region.

The scenarios studied to date have shown that VMT can be curtailed, although the changes have only been one to two percent for the region as a whole. However, the scenarios have looked at separate packages of land-use strategies, transit system improvements and variably priced travel lanes. For example, one of the scenarios shifted approximately 5 percent of households



JOHN DEARMOND

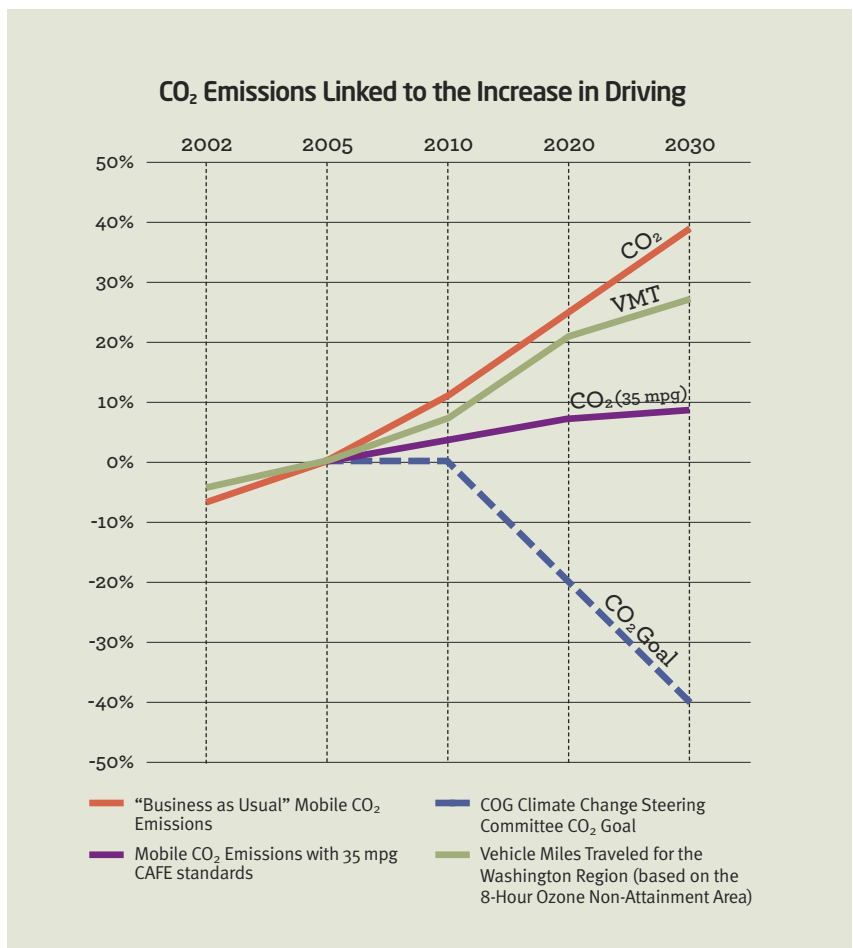


that are expected to be in place in 2030, along with supporting transit improvements. In 2008, the TPB's Scenario Study Task Force began an analysis that will examine combinations of land-use and transportation changes to produce larger reductions in VMT and in CO₂ emissions.

What Would it Take?

The TPB's new *What Would It Take?* Scenario will begin with an ambitious performance target for reducing CO₂ emissions. With that target in mind, regional planners will then set about determining what combination of interventions would be needed to achieve the established CO₂ reduction goals. The TPB's Scenario Study Task Force decided to focus this scenario on CO₂ reductions because of the growing urgency of global warming. Many strategies that specifically seek to reduce CO₂ emissions also provide spillover benefits of reduced congestion, greater air and water quality and greater energy efficiency.

TPB staff will work closely with COG's Climate Change Steering Committee to assess various options for reducing transportation-related CO₂ emissions, as part of a comprehensive strategy for reducing greenhouse gases from all sources. The Steering Committee has proposed regional goals that would reduce CO₂ emissions from all sources to 20 percent below 2005 levels by 2020, and 80 percent below 2005 levels by 2050. These goals reflect the international scientific consensus about the minimum steps we



New federal fuel efficiency (CAFE) standards will slow the increase in transportation-related (mobile) emissions of CO₂, but much deeper cuts are needed to achieve necessary reductions below today's CO₂ levels.



JOHN DEAMOND



JOHN DEAMOND



UMAIR BADELU



JOHN DEAMOND



Meeting the targets for CO₂ reduction will require a spectrum of solutions, both large and small.

must take as a planet if we intend to limit the most catastrophic impacts of climate change.

The *What Would it Take?* Scenario will look at a variety of CO₂ reduction strategies, including improvements in fuel efficiency, alternative fuels and new technologies, and a host of changes designed to reduce vehicle miles of travel and increase transportation system efficiency. These latter factors might include land-use patterns that facilitate walking, biking and transit use; variably priced travel lanes to manage congestion; improved traffic operations and incident management; and a wider availability of alternatives to single-occupant vehicle travel.

In the arena of land use, for example, the scenario might look at large-scale land-use changes, such as increased infill development in places that are already considered “built-out” and more concentrated transit-oriented development. Such land-use shifts could be tailored to induce targeted changes in travel behavior, such as increased use of transit and carpools, more trips on foot or by bicycle, increased telecommuting or carpooling and increased opportunities for trip-chaining (making one trip with several purposes).

Meeting the targets for CO₂ reduction will require a spectrum of solutions, both large and small. In the realm of transportation and land-use planning, TPB members have emphasized that “one size will not fit all.”

“When we look at the scenarios and we think about climate change, we need to understand that it’s not just simply a question of putting down more transit or more roads,” said Cathy Hudgins, 2007 TPB chair and Fairfax County Supervisor. “We need to be thinking about what *kind* of transit we need, how frequent will it be, how accessible, how dependable... and what kinds of land uses we need in different parts of the region that will be tailored to various kinds of transit enhancements.”

The TPB is scheduled to complete the *What Would It Take?* Scenario by the end of 2008, along with a *CLRP Aspirations* Scenario, which will identify and analyze potential priorities for the TPB’s Long-Range Plan update in 2010. In 2009, the new scenarios will be presented to the public as part of a new round of public involvement activities to discuss and develop a set of priorities for the region to pursue, including key transportation projects and regional growth policies.

Serving the Transportation-Disadvantaged

The TPB assumed a new responsibility in 2006 as the “designated recipient” of funding under the federal Job Access Reverse Commute (JARC) and New Freedom programs. Administered through the Federal Transit Administration, the programs are designed to improve services for transportation-disadvantaged people, including those with disabilities, lower-incomes, or limited access to transit.

To inaugurate this new responsibility, the TPB approved funding for five JARC and New Freedom projects in September of 2007. The

board approved 12 additional projects in June of 2008 for a total of \$1 million in JARC funding and more than \$1.5 million for New Freedom projects.

The TPB’s Coordinated Human Services Transportation Plan for the National Capital Region, approved

in April 2007, established a competitive process for soliciting project applications and selecting projects for JARC and New Freedom funding. Projects were selected based on a range of criteria, including indications that projects would be innovative and replicable, and would meet a regional need. Applicants were also encouraged to include private sector partners and identify strategies for securing ongoing non-federal funding.

JARC funds are intended to improve transportation for low-income workers in reaching job sites and job-related activities, including training. Formerly an earmarked program, the JARC program is now a formula-based program in which projects must be competitively selected. The New Freedom program was

created for the first time under the 2005 federal transportation reauthorization legislation (SAFETEA-LU) to fund transportation services beyond what is required by the American with Disabilities Act (ADA).

The JARC projects approved by the TPB included funding for shuttle bus services to Metro stations, a car loan program for low-income individuals with limited access to transit, and programs to provide travel assistance to immigrants and refugees in finding employment. The program also provided funding to COG to develop a website with phone support that will provide consumers and social service agencies with information about the multitude of transportation options for people with disabilities, older adults and low-income commuters for all jurisdictions in the TPB planning area.

For New Freedom funding, wheelchair-accessible taxicabs have been identified as a major priority. Currently the District of Columbia has no wheelchair-accessible cabs. Five of the JARC/New Freedom projects in 2008 were for the development and operation of such cabs in D.C. Other New Freedom projects funded through the TPB included training programs to help individuals with specialized transportation needs learn how to navigate and travel on public transportation.

The TPB was one of the first Metropolitan Planning Organizations (MPOs) in the U.S. to become a designated recipient of JARC/New Freedom funding after the federal transportation reauthorization was passed in 2005. The TPB received an Award from the Association of Metropolitan Planning Organizations (AMPO) in 2007 for its new role in human service transportation coordination.



LARRY LEVINE WIMATA

Commuting Habits Documented in New Study

The percentage of workers in the region who telecommute has increased by roughly 50 percent over the past few years, according to a 2007 survey conducted by the TPB's Commuter Connections program.

About 18.7 percent of respondents to the 2007 State of the Commute Survey said they telecommute at least occasionally, compared to 12.8 percent in 2004. Twenty-four percent of commuters who do not currently telecommute said they "would and could" telecommute if given the opportunity.

Commuter Connections conducts the State of the Commute survey every three years to document trends in commuting behavior.

According to the survey, the average one-way commuting distance in 2007 was 16.3 miles and 35 minutes, essentially the same as in 2004.

The survey showed that facilities and services are widely available for alternative commuting. More than eight in ten (84%) respondents said either bus or train options were available in their home area, and 78 percent said some transit was available in the area where they worked.

But driving alone remains the most popular commute mode. The survey found that about 71 percent of commute trips are made by solo drivers, a decrease from 74 percent in 2004.

Carpool/vanpool trips increased from 6.1 percent to 7.6 percent between 2004 and 2007.

Respondents said that train use accounted for 13.5 percent of their trips, bus accounted for 5.2 percent and bike/walk trips accounted for 2.7 percent. All these modes increased less than one percent compared to 2004 survey findings.

About 17 percent of respondents said they made a job or housing change in the past year.

The survey found that commuter assistance services provided by employers, such as transit and vanpool subsidies, can have a big impact on reducing solo driving.

More than one in five of these respondents said they considered a commuting-related factor, including ease and cost, when making their location decision. Twenty-eight percent said ease of commute was more important than other factors in making their decision.

Of the 6,610 workers polled in the survey, 27 percent said their commutes

were more difficult than they were a year ago, mainly due to congestion. But 14 percent said their commutes were easier and this was partly due to changes they had made themselves, including using alternative modes or HOV lanes.

The survey found that commuter assistance services provided by employers, such as transit and vanpool subsidies, can have a big impact on reducing solo driving. Sixty-two percent of respondents with access to these services drove alone to work, compared with 78 percent whose employers did not provide these services.

Free parking continues to be pervasive and



JOHN DEMOND



UMAIR BADEU



appears to be an incentive for driving alone. The majority of respondents (65%) said their employers offer free onsite or off-site parking, about the same as in 2004 and 2001. The survey found that 83 percent of commuters with free parking provided by their employers drive to

The TPB's Commuter Connections programs promote telework, transit use, carpooling and other alternatives to driving alone. Commuter Connections services include telework support, the Guaranteed Ride Home program, employer outreach activities, and ridematching. A regional

83% of commuters with free parking provided by their employers drive to work alone. When employers do not provide free parking, that number drops to less than half (48%).

work alone. When employers do not provide free parking, that number drops to less than half (48%).

The survey found that more than half (52%) of respondents had seen, heard or read advertising about commuting options in the six months prior to the survey. Of those who recalled the ads, 18 percent said they were more likely to consider ridesharing or public transportation after seeing or hearing the advertising. About half (51%) of respondents said they knew of a telephone number or website to obtain commute information.

mass marketing program is designed to encourage alternative commuting and provide information to workers about their transportation options.

Results from the State of the Commute Survey are used to help estimate the impacts of Commuter Connections programs. The programs are supported by the District of Columbia, Maryland and Virginia Departments of Transportation with state and federal transportation funds.

Dealing With the “Ripple Effects” of Incidents

Working with the TPB, key regional transportation agencies are moving toward the implementation of the Metropolitan Area Transportation Operations Coordination (MATOC) Program, which will play a critical role during transportation incidents that can cause major transportation tie-ups. The program will enhance the availability of real-time transportation information for the public as well as strengthening coordination among transportation agencies.

MATOC is being implemented to help transportation agencies recognize and detect potential “ripple effects” that occur from incidents. The tools developed through the program will be used to notify agencies of those ripple effects, help coordinate the management of traffic and transit impacts, and inform the public with verified and consistent information about traffic and transit conditions.

“MATOC is not an entity that will actually manage incidents or situations,” explained Richard Steeg of VDOT who serves as the organization's chair. “It is an entity that will provide information and coordination. The folks who are actively engaged in the here-and-now are not in a position to stop and ask questions about the regional implications of whatever has happened, be it weather or traffic incident. We believe that the need for broader ‘situational awareness’ will be addressed by MATOC.”



The goals of the MATOC Program include:

- Improving technological systems for sharing transportation information among agencies involved in managing regional incidents;
- Enhancing the transportation sector's standard operating procedures and notification practices for incidents; and
- Providing more timely and accurate transportation information to the public during incidents.

The MATOC Program is building on current relationships among the region's emergency and transportation personnel. MATOC operating agency participants are the departments of transportation in Virginia, Maryland and the District of Columbia, as well as the Washington Metropolitan Area Transit Authority (WMATA). Initial funding for the program has been provided through a SAFETEA-LU grant secured by Virginia Congressman James Moran with matching funds from the departments of transportation.



The TPB's Community Leadership Institute is a two-day workshop that encourages participants to connect the interests of their communities with the planning issues facing the entire Washington region. The Institute is one of many tools highlighted in the TPB's new Participation Plan.



Involving the Public at Many Levels

The Transportation Planning Board in December 2007 adopted a Participation Plan that moves beyond a one-size-fits-all approach to public involvement activities. The new Participation Plan, which was required by the 2005 federal transportation reauthorization legislation (SAFETEA-LU), gave the TPB the opportunity to integrate recent enhancements in the TPB's outreach efforts including a new website, leadership training activities and interactive forums on land-use and transportation scenarios.

The plan calls upon the TPB to be more strategic in targeting its activities to serve the needs of three different levels of constituencies, which are defined as the "involved" public, the "informed" public and the "interested" public. These three categories represent a continuum of typical levels of interest and expertise, ranging from individuals who are already extremely active to members of the general public who have never heard of COG or the TPB.

The Participation Plan also articulates the overarching importance of public involvement in the decision-making process. "The TPB believes that public input into its process is valuable and makes its products better," the document states. "Regional transportation planning cannot and should not be based simply upon technical analysis. The qualitative information derived from citizen involvement is essential to good decision-making."

The TPB developed the Participation Plan throughout 2007, receiving input from numerous stakeholder groups. Now that the Participation Plan has been adopted, TPB staff will develop an Annual Participation Program that will identify the public involvement activities to be conducted over the course of each fiscal year and define how the activities will enhance the ability of each constituency to participate in the TPB process.

TPB Surveying 10,000 Households

The Transportation Planning Board in 2007 launched the region's first large-scale household travel survey in more than a decade. The survey will help guide future transportation planning.

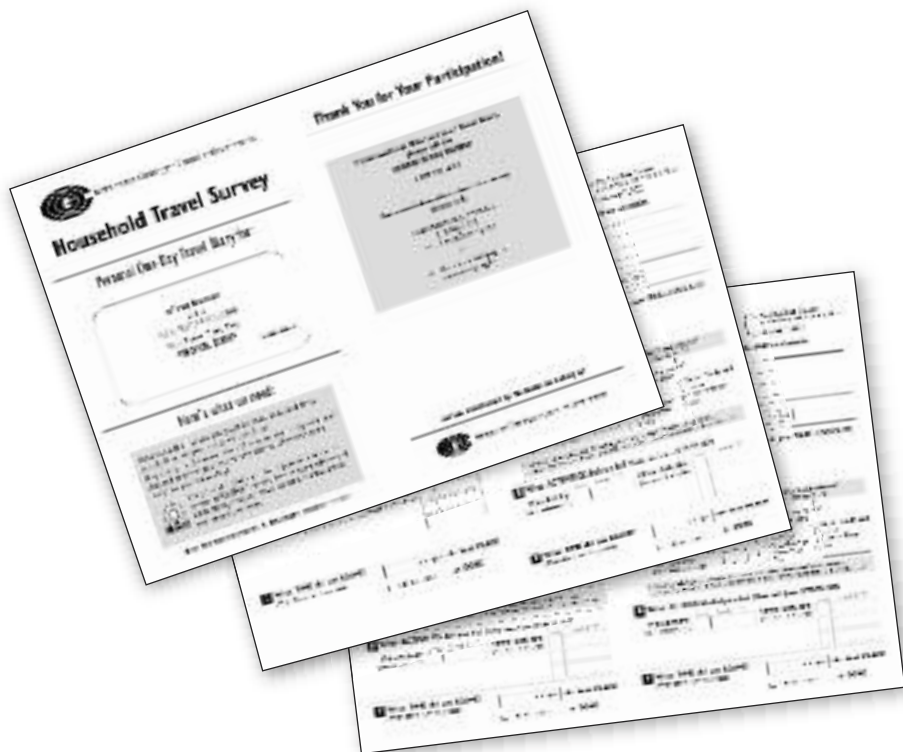
Throughout 2007, the survey assessed the travel behaviors of 10,000 randomly-selected area households. The survey will be used to inform new forecasting models for use in future transit and highway planning. As the region faces a predicted increase of 1.6 million residents by 2030, the survey will also help local governments figure out which transportation improvement projects will benefit their growing communities most.

“The information we expect to gain from this survey will be invaluable in determining how to relieve future congestion on our roadways and transit systems,” said TPB Chair Catherine Hudgins. “The individuals and families who agree to take part will be providing us with essential information that we simply cannot obtain without their help.”

Participants in the survey were asked to keep records of all travel made by family members for a period of 24 hours — including regular commuting and non-regular travel, such as shopping or visiting friends. Participants were also asked about personal activities, such as online shopping, that replace errands residents would otherwise be making by car. The TPB's consultant conducted interviews in both English and Spanish. Households were selected at random from the TPB's member jurisdictions and adjacent areas.

Longtime TPB member Kathy Porter emphasized that the Household Travel Survey affords regular citizens the opportunity to participate in an important process for transportation planning in the region. “People should know that we will be using this data to make future transportation plans. This is an opportunity to assist in addressing some of those problems in getting around,” said Ms. Porter, who was formerly mayor of Takoma Park.

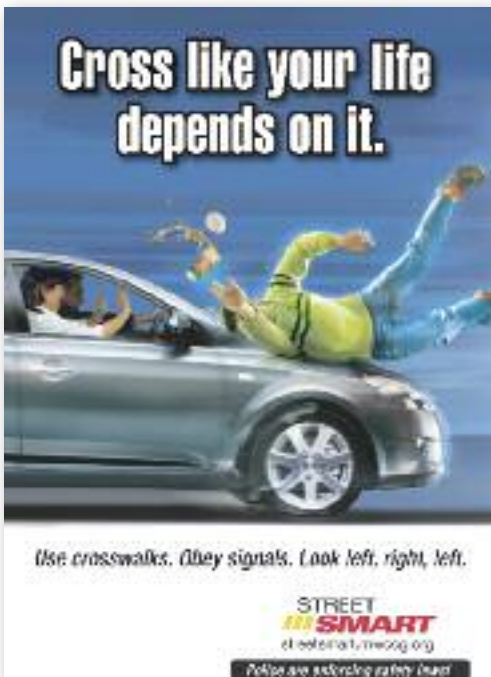
The TPB expects to release a report containing initial findings in the fall of 2008.



Pedestrian Safety Campaign Expanded

An 80-year-old woman struck down in a Ballston parking garage... a 6-year-old boy killed in DC on the way to a school bus... a 23-year-old man fatally injured in Rockville while crossing against a traffic signal. These are just a few examples of the many pedestrian fatalities and injuries that have occurred recently in the Washington region.

To raise awareness about this problem, the TPB has conducted a month-long media campaign called Street Smart every year since 2002. In 2007, the TPB decided to step up these educational efforts by conducting the campaign twice a year instead of just once. To fund the increased media, TPB member jurisdictions have increased funding contributions for Street Smart.



Chris Zimmerman, Arlington County Board member and TPB member, instigated the drive for increased funding. “If we want to make this program work, we need enough money to make it really effective,” said Mr. Zimmerman.

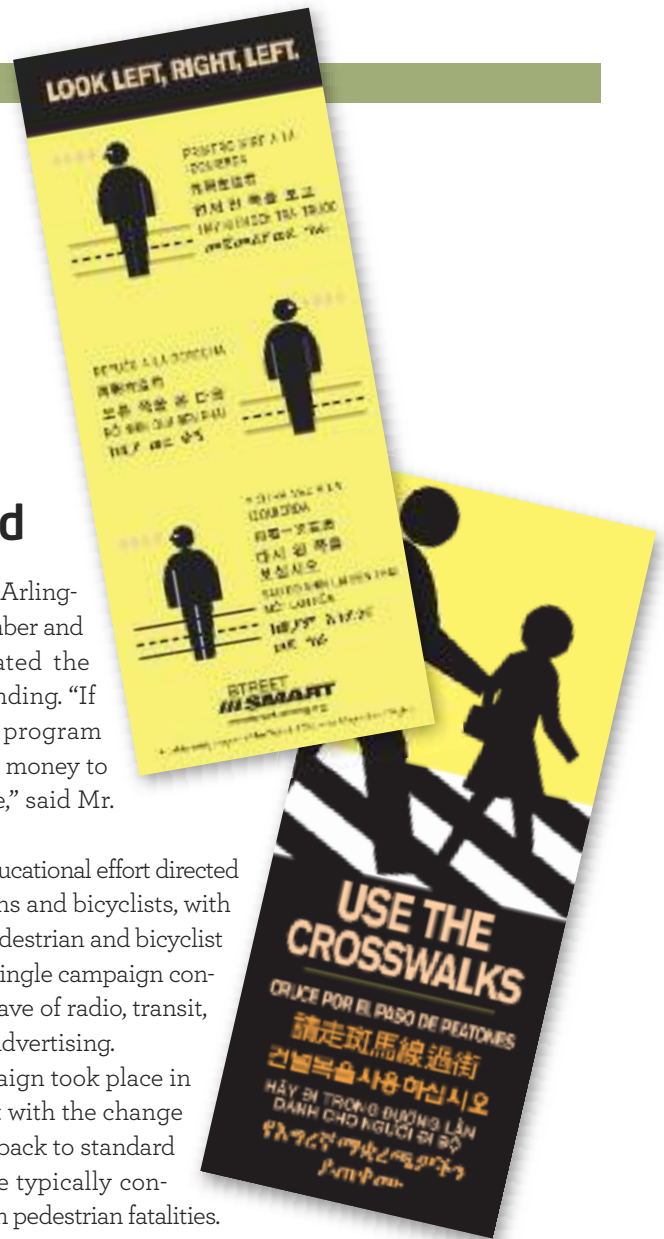
Street Smart is an educational effort directed at motorists, pedestrians and bicyclists, with the goal of reducing pedestrian and bicyclist injuries and deaths. A single campaign consists of a one-month wave of radio, transit, internet, and outdoor advertising.

The fall 2007 campaign took place in November, concurrent with the change from daylight savings back to standard time. The time change typically contributes to an increase in pedestrian fatalities.

Evaluations of the Street Smart campaign show that it is having an impact. For example, 14 percent of respondents reported having to “swerve to avoid a pedestrian in the last seven days” compared to 32 percent in 2002.

The TPB has also emphasized the importance of combining the media campaign with stepped-up law enforcement efforts, including increased ticketing of drivers, pedestrians and cyclists. Research shows that a law enforcement component makes public education programs much more effective.

The Street Smart Campaign is supported through member contributions, Federal Highway Administration safety funding administered through the state departments of transportation, and private contributions.



Membership of the National Capital Region Transportation Planning Board



0 5 10 kilometers

0 5 10 miles



National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, NE Suite 300
Washington, DC 20002-4290
(202) 962-3200
www.mwcog.org