

THE

# REGION

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

VOL. 41 2002

Focusing on the Here and Now:  
Transportation Priorities for  
the Immediate Future



Transportation Planning Board Annual Report for the Year 2001

## 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 non-voting 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.

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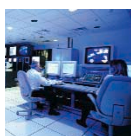


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### THE REGION

*Managing Editor:* John Swanson; *Design:* Carla Badaracco; *Photography:* Mark Pfoutz

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 issue was funded, in part, by grants from the District of Columbia Department of Public Works, the Maryland Department of Transportation, the Virginia Department of Transportation, the Federal Highway Administration and the Federal Transit Administration. Publication No. 22607. Copyright 2002.



# A YEAR OVERTAKEN BY EVENTS

## A YEAR OVERTAKEN BY EVENTS

BY JOHN MASON, 2001 TPB CHAIRMAN



**T**he terrorist attacks of September 11 ushered in a new era filled with insecurities. As 2001 chairman of the Transportation Planning Board, I am proud that the TPB played a role in responding to these unexpected challenges. We immediately recognized that transportation management and operations improvements—already a 2001 TPB priority before the terrorist attacks—were vital for the improved emergency management of our road and transit systems. We launched fast-track improvements to coordinate transportation decision-making among key agencies in the event of future emergencies, as well as undertaking a number of other initiatives to enhance the transportation system’s ability to respond to sudden crisis.

## After last year, it has become more apparent than ever that regional transportation issues are closely intertwined with homeland security, environmental quality and economic prosperity.

But even if September 11 had not happened, 2001 would have been a year overtaken by events. Air quality challenges, another unexpected development, also dominated the TPB's agenda in 2001 and delayed the normal approval process for amending the region's long-range transportation plan and 6-year Transportation Improvement Program. In addition, the long-term transportation funding shortfall, which became so apparent in 2000, only got worse in 2001 as the nation faced recession.

Overall, the TPB's 2001 agenda reflected questions that are central to the future of our region. After last year, it has become more apparent than ever that regional transportation issues are closely intertwined with homeland security, environmental quality and economic prosperity.

We have made important strides in finding solutions to these long-term challenges. By the end of the year, the TPB had released for public comment a package of potential solutions for meeting federal air quality conformity requirements. On the funding front, the TPB designated Metrorail's preservation, maintenance and expansion to be a regional priority. This action began a regional prioritization process—an important step for the TPB to have taken, as the region's only multi-modal transportation decision-making body. Of course, much work remains.

As chairman, my key theme for 2001 was the advancement of the TPB's collective thinking toward a more regional perspective. I hope we will continue to consider what should be the next level of maturation for the organization as we seek to do a better job of coordinating transportation challenges in the future. If nothing else, the traumatic events of 2001 have made the need for improved regional cooperation more apparent than ever.



GERALD GILMORE, HQ AFIS

**On the morning of the September 11 terrorist attacks, the Pentagon was evacuated, as were other federal buildings including the Capitol and the White House. The Pentagon's workday population is about 24,000.**

# MANAGEMENT AND OPERATIONS TAKE ON A NEW URGENCY IN 2001



COSMO CONDINA/GETTY IMAGES

**O**n the morning of September 11, transportation questions were on everyone's mind: "Is the Metro open? What route should I take home? Can I pick up my kids at school?"

In those terrifying moments, most people were caught off guard. While many transportation and emergency systems did work well that day, and emergency workers responded heroically, the event showed that the region needed to improve its emergency transportation management systems.

In the aftermath of the attacks, regional leaders had to quickly assess how we would deal with these issues if another emergency should arise. Fortunately, management and operations (M&O) systems were already considered transportation priorities in the Washington region. Prior to September 11, the TPB was pursuing these improvements—which include measures such as better traveler information, seamless payment systems and improved accident response coordination—because of the need to squeeze more efficiency out of our transportation system. The terrorist attacks put these transportation management and operations improvements on the "front burner."





## SEEKING GREATER EFFICIENCY

When a commuter digs through her pockets to find a Metro card or reaches for coins for a toll, those added seconds slow down traffic flow. When you multiply those added seconds by thousands of daily commuters, travel can get backed up. And when a traffic accident occurs, the system can crawl to a standstill, causing delays for thousands of commuters. Nationally, about 60 percent of highway congestion results from non-recurring incidents, such as motor vehicle crashes.

Across the region, our growing population and expanding economy are putting added stress on our transportation network. More cars are congesting the roads. More people are crowding the trains. In the past, transportation decision-makers responded to these demands by building new roads, transit and other facilities. But as the Washington region matures, new transportation capacity projects face the challenges of higher costs and community concerns about the impacts of new construction.

Management and operations improvements help the transportation system get maximum use out of existing facilities. M&O improve-

ments help to “keep things moving” by providing better traveler information, keeping one-time incidents from tying up traffic, and smoothing out little snags—like payment systems—that slow down the flow of people and goods.

## BUILDING ON A TRACK RECORD

The TPB’s ongoing work in transportation management and operations made it well positioned to respond to the needs arising from September 11. Since the mid-1990s, a TPB task force has been devoted to improving the coordination of Intelligent Transportation Systems or ITS. The term “ITS” emphasizes the technical tools, usually computer and communications technologies, that are typically used to improve management and operations.

The TPB’s 2001 chairman, John Mason, elevated the prominence of management and operations when he made it one of the TPB’s priorities for the year. Chairman Mason emphasized that improved management of the transportation system was a key element in the TPB Vision, the regional transportation policy framework adopted by the board in



**Traffic management centers, like the Montgomery County facility pictured above, helped manage the crisis on September 11.**

1998. Federal requirements also focus attention on these types of improvements.

At the beginning of 2001, the ITS Policy Task Force was renamed the Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force. This new name reflected a fresh emphasis on the broader goal of enhanced system efficiency, rather than focusing just on the technological means of achieving that goal. Under the chairmanship of Falls Church Councilman David Snyder, the MOITS Policy Task Force's primary mission was to facilitate improved coordination between jurisdictions rather than to supplant or centralize existing activities. Part of this role was to "champion enhanced ITS activities," Councilmember Snyder emphasized.

One of the most visible ITS achievements has been the tremendous success of the Metro system's SmarTrip card. Richard White,



general manager of the Washington Metropolitan Area Transit Authority (WMATA), told the TPB at its January meeting that the public's acceptance of the new card has been "nothing short

of phenomenal." In January, the TPB approved funding to extend the SmarTrip card beyond the WMATA system, by making it operational on local buses, and on the VRE and MARC commuter rail networks.

The TPB and its MOITS Policy Task Force worked throughout 2001 to promote specific technology applications, like the SmarTrip card, as well as working to improve coordination among different projects. These

coordination efforts include developing a highly technical M&O/ITS "architecture" that will map the information connections and flows among key transportation technology systems, and developing an M&O/ITS Strategic Plan to provide a regional framework for coordination.

M&O activities focusing on emergency response were especially apt when the challenges of September 11 arose. One of these projects was the Capital Wireless Integrated Network (CapWIN), a system being implemented to facilitate wireless communication between public safety and transportation agency personnel. Until recently, emergency responders from different states or jurisdictions could not communicate directly with each other, but instead had to relay information through a dispatcher.

## RESPONDING TO SEPTEMBER 11

The terrorist attacks on the Pentagon created immediate transportation problems on the morning of September 11 as offices closed and thousands of workers crowded onto the region's roads, buses and trains. In most cases, the evacuations were orderly, but regional leaders noted afterwards that coordination among jurisdictions and agencies was ad hoc, and in some cases it was inadequate.

The need for improved regional collaboration became apparent immediately. The Council of Governments and, in the case of transportation, the TPB, assumed responsibility for leading this effort.

The TPB quickly began working on a transportation emergency management plan for the region. Katherine Hanley, chairman of the Fairfax County Board of Supervisors, noted that individual jurisdictions were





Local firefighters battle the blaze September 11, at the Pentagon.

JIM GARAMONE, HQ AFIS

already active in revising their own emergency procedures. "But if we do these things without some overarching coordination, we're going to have a lot of puzzle pieces that don't fit together."

The first step was to find a "quick-fix" for the interjurisdictional communications and coordination problems arising on September 11. The immediate solution was developing a telephone/radio conference call protocol that would be implemented in the event of future emergencies. In November the TPB adopted this framework for coordinated decision-making, which would use a conference call system for communication.

In the event of future emergencies, the lead agency in the area where the incident occurred would initiate a conference call with other key agencies throughout the region. Others participating in the conference call would include the state departments of transportation, public safety agencies, WMATA, the National Park Service, which owns a number of key transportation facilities in the region's inner core, and other agencies.

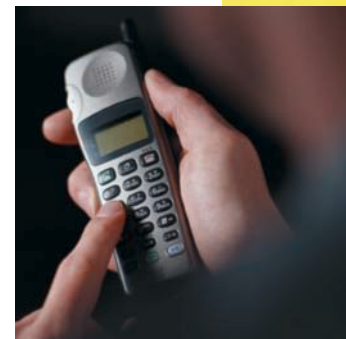
The lead organizations involved in the conference call would communicate with

other affected agencies. For example, the state departments of transportation in Virginia and Maryland would contact local jurisdictions in those states, while WMATA would contact other transit providers in the region. During the conference call, decision makers would designate one agency to provide consolidated information to the media.

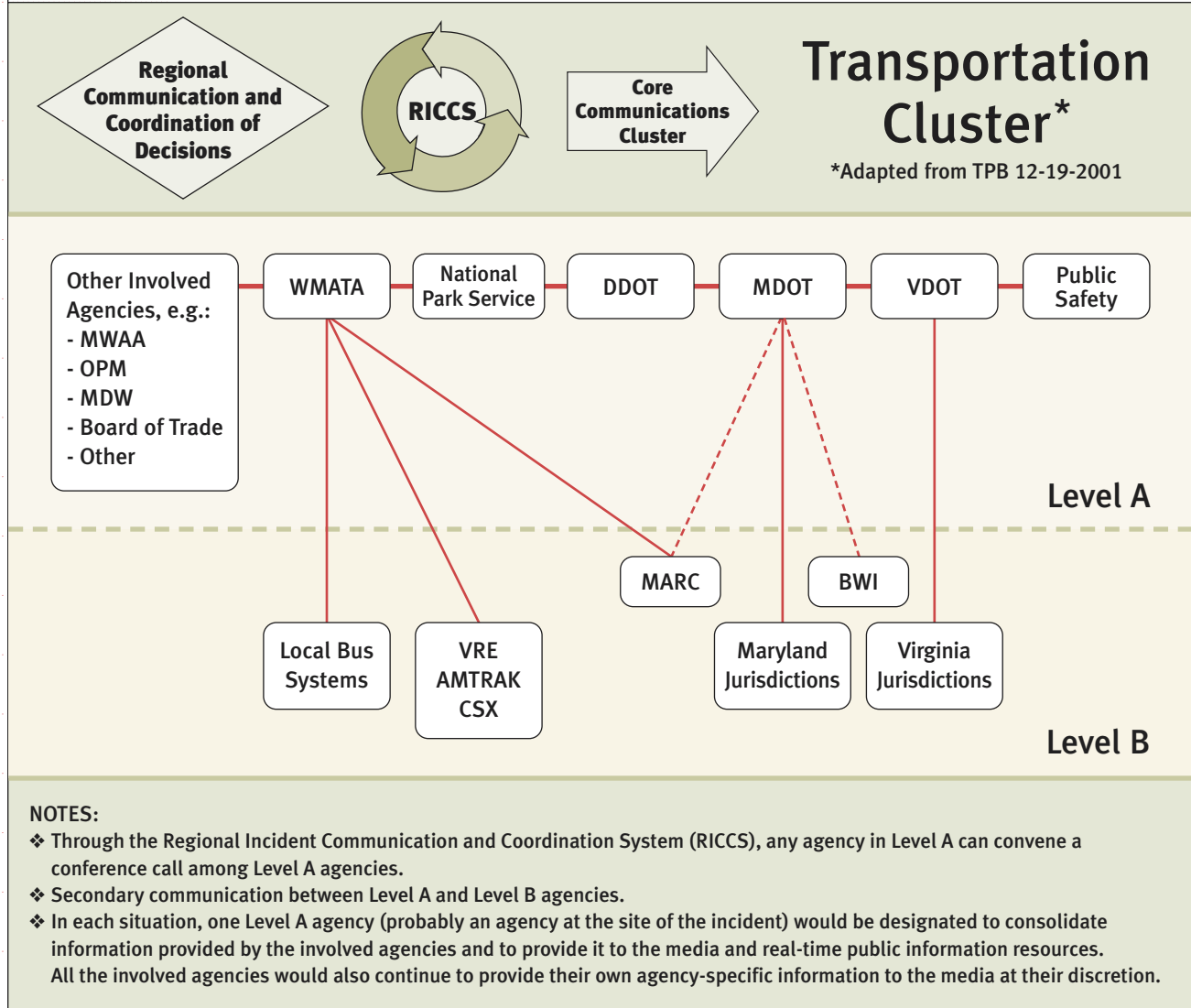
The TPB conducted test runs of the emergency conference call system beginning in December. These tests provided the opportunity to learn what additional equipment was needed, including notification devices such as pagers. The test calls also allowed key players to discuss emergency scenarios they needed to anticipate.

As a next step, the MOITS Policy Task Force began developing a list of scenarios or contingencies that will be addressed in a regional emergency "playbook," a manual that will be developed to recommend particular responses for various types of emergencies in different times and places.

**New communications equipment, such as cellular telephones/radios and pagers, will improve emergency communications.**



# Interim Incident Communications Process for the National Capital Area



## EMERGENCY PREPAREDNESS FUNDING SOUGHT

The TPB coordinated its transportation efforts with COG's regionwide Task Force on Homeland Security, which addressed 15 separate "support functions," including transportation, public safety, solid waste, and energy. One key task of this COG task force



was the development of a consolidated funding request to Congress.

As part of the process to develop a list of needs, the TPB and its MOITS task force compiled a list of recommended improvements for transportation emergency preparedness. High on the TPB's list were public information improvements focusing on rapid collection and dissemination of information to the public in the event of future emergencies. One potential new service would be a 511 hotline with traffic and transit information. In 2000, the U.S. Congress reserved these three digits for nationwide traveler information. Regional leaders have begun talks to speed up the implementation of 511.

The MOITS Policy Task Force has identified other needs, including fail-safe and redundant communications infrastructures. Such improvements would include new fiber optics connections between agencies, new communications equipment for transportation agencies, and a backup operations and communications center for WMATA and local transit systems.

In addition, the MOITS task force identified other equipment needed for emergencies.

These items include additional cameras and monitoring equipment to protect travelers and transportation infrastructure. Traffic control devices—such as variable message signs, lane control signals, and gates on entrance and exit ramps—are also vital.

In March 2002, the TPB approved this list of recommended needs, which was forwarded to key members of Congress for consideration in federal appropriations legislation.

## EVERYDAY BENEFITS

TPB leaders have emphasized that transportation emergency preparedness improvements will result in everyday benefits. Better traffic management will ease our daily commutes. Traveler information will help us avoid backups. Improved incident response systems will help keep traffic moving.

“Regional management and operations collaboration is an idea whose time has come,” said David Snyder, MOITS Policy Task Chairman, in his final presentation of the year. If anything, the region's focus on these kinds activities will only intensify in the years to come.

**More traffic control devices are needed, like the entrance ramp gate, pictured below, and the variable message sign in the picture above.**





# CLEAN AIR ISSUES PUT TRANSPORTATION PLANNING PROCESS ON HOLD

## CLEAN AIR ISSUES PUT TRANSPORTATION PLANNING PROCESS ON HOLD



In 2001, for the first time ever, the regional transportation planning process was put on hold because federal Clean Air requirements could not be met. New transportation projects—those affecting air quality and not already included in earlier versions of the regional transportation plan and program—were delayed. And the TPB agenda became dominated by a challenge that was tough to define and even more difficult to solve.

### WHAT'S THE PROBLEM?

Under the federal Clean Air Act, the TPB is required to determine that mobile emissions produced under the 25-year Constrained Long-Range Plan (CLRP) and the 6-year Transportation Improvement Program (TIP) will "conform" to regional air quality improvement goals. This finding, which is called a "conformity determination," is based on calculations made with computer models that estimate future travel and emissions.

The TPB made a conformity determination in October 2000. That finding received federal approval in January 2001. It applied to the 2000 CLRP and fiscal year (FY) 2001-2006 TIP. Throughout 2001, this plan and program remained the valid documents under which federal transportation funding continued to flow to the region.

In the spring of 2001, the TPB was scheduled to begin the process of approving an air quality determination for new amendments to the CLRP and a new TIP for fiscal years 2002-2007. But problems arose when the TPB staff estimated that mobile source emissions of nitrogen oxides (NO<sub>x</sub>) would surpass the ceiling on emissions (the "emissions budget") in the region's air quality improvement plan.

## The Key Points on Conformity

An attempt to boil down the air quality conformity problem to a few key points might go something like this:



- 1. We're in violation of federal Clean Air standards.** Air quality in the Washington metropolitan region is in violation of federal standards, and this is a serious problem.
- 2. Transportation is part of the problem—and part of the solution.** Motor vehicles are a major source of air pollution, and therefore federal law requires regional transportation plans and programs to contribute to emissions reduction goals.
- 3. Transportation-related emissions have been predicted to exceed regional limits in the year 2005.** In 2001 the TPB found that emissions produced by the transportation system in the draft amendments to its transportation plan and program would exceed the limits specified in the region's air quality improvement plan.
- 4. The regional transportation planning process was put on hold.** Until a solution could be found, no new projects that affect air quality could be added to the region's 25-year plan and 6-year Transportation Improvement Program (TIP).

Of course, the story is not quite so simple. Air quality, while undoubtedly a major problem, has actually been improving in recent years and is predicted to continue to get better. Furthermore, the predicted emissions problem in 2005 arose primarily because more accurate data became available about the kinds of vehicles that are on the road. That data showed that previous statistics had seriously undercounted the number of sport utility vehicles and light trucks.

NO<sub>x</sub> is a compound that combines with volatile organic compounds (VOCs) in sunlight to form ground-level ozone. The Washington region is in violation of national standards for ozone.

The NO<sub>x</sub> levels were predicted to be approximately 8 tons above the emissions ceiling of 161.8 tons per day. These conformity problems arose primarily because of anomalies between the 1996 and 1999 vehicle registration data and “VMT (vehicle miles of travel) mix” data. VMT mix shows how many road-miles are traveled by different types of vehicles.

When the TPB staff received the new 1999 data on vehicles from state and federal sources, they were surprised to find an unanticipated rapid growth in sport utility vehicles (SUVs) and trucks. For example, the data showed more than a 10-fold increase in heavy duty gasoline vehicles registered in Fairfax County, Arlington and Alexandria. Earlier data, from 1996, upon which the emissions ceilings and the 2000 conformity determinations were based, are now believed to have undercounted SUVs and trucks.

The immediate impact of the conformity problem was limited. Only a few projects,

including widening Virginia’s Route 28, were actually stalled. Projects included in the earlier approved conformity determination were allowed to move forward. Although the conformity determinations for the 2000 CLRP and FY2001-2006 TIP were based on the 1996 vehicle data, which are now thought to be inaccurate, those determinations remained valid because they were based on the best available data at the time.

However, the future impacts of the conformity problem would become very serious if they were not addressed in the near future. The FY2001-2006 TIP, under which the region was receiving transportation funding, was set to expire in January 2003. The 2000 CLRP will expire in January 2004. If a new conformity determination were not made before January 2003, only projects already under contract could be implemented.

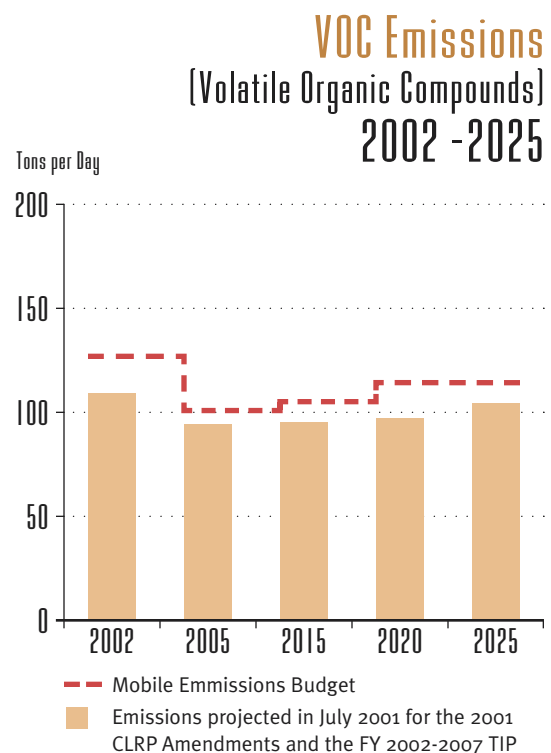
Faced with no other option, the TPB voted in July to put the new TIP and CLRP amendments on hold. TPB Chairman John Mason appointed a task force to identify steps to mitigate the emissions problem. “We need to take steps right away as regional leaders to deal with this problem,” he said.

### COMING TO TERMS

As a broad public policy issue, clean air resonated throughout the year with public officials and citizens, despite the arcane details of the immediate conformity problem. Media reports focused particularly on the impact of SUVs, estimated to represent 25 percent of the personal vehicles on the region’s roads. A *Washington Post* front-page headline on July 8 announced: “SUVs Drive Area to Pollution Violations.” In connection with these public discussions on air quality, a number of long-term emissions reduction proposals were put on the table.



But the air quality conformity challenge confronting the TPB was actually very short-term. “A whole lot of things may be part of the long-term solution, but our problem here is by 2005, and that is four years or less away,” said Katherine Hanley, chairman of the Fairfax County Board of Supervisors. “So, the solutions have to be immediate.”





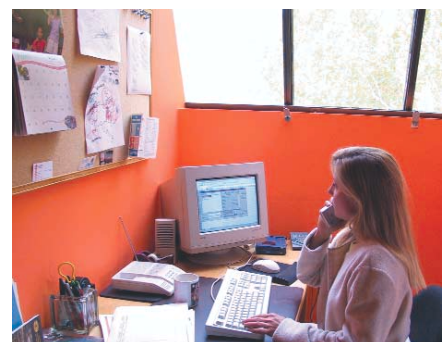
In August, the TPB's Air Quality Task Force got to work under the leadership of D.C. Councilmember Phil Mendelson, who in 2001 served as a TPB vice chairman. In 2001, Mr. Mendelson also served as chairman of the Metropolitan Washington Air Quality Committee (MWAQC), the regional body responsible for the development of the regional air quality improvement plan.

The task force began by looking at Transportation Emissions Reductions Measures (TERMs) that might be implemented to solve the problem. The TERMS being examined included increased telecommuting programs, enhanced speed limit enforcement on major highways, and parking fees. Other measures under investigation were based on technological remedies such as expanded alternative fuel vehicle programs for buses and taxicabs, fuel additives, and programs to replace or retrofit older diesel engines for

trucks or school buses. In all, the TPB staff analyzed more than 50 potential measures to quantify how much they could lower emissions, how cost-effective they would be and what would be their total cost.

Conflicting interpretations of the problem made the work of the task force difficult.

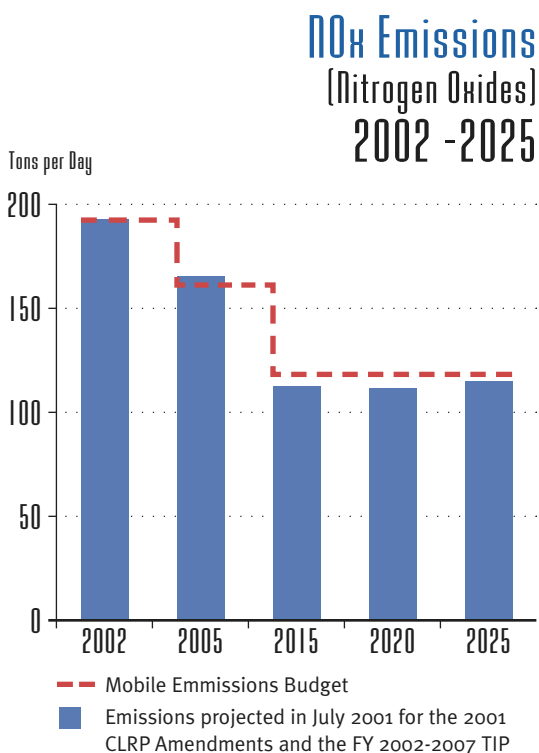
Some advocacy groups and citizens argued that adopting transportation measures—TERMs—was the only appropriate solution because the conformity problem was linked to transportation-related emissions.



**Increased support for telecommuting programs is one Transportation Emissions Reduction Measure approved by the TPB.**

Others countered that the ceilings on transportation emissions were established using vehicle data that later were found to be inaccurate. Therefore, they argued, these ceilings should be raised and other sources of pollution, such as power plants, should be tapped for additional emissions reductions. However, the process for changing the emissions limits in the region's air quality plan would have been a lengthy and controversial process.

From the beginning it was clear that TERMS would be difficult to fund. Various packages of measures were estimated to cost tens of millions of dollars over three years. As the nation moved into recession in 2001, state and local jurisdictions across the region tightened their budgets. Facing growing financial uncertainty, jurisdictions were hesitant to make commitments to TERMS during task force discussions throughout the fall of 2001.



## Key Milestones Related to Air Quality Conformity

According to federal requirements, the TPB's

25-year Constrained Long-Range Plan (CLRP) must be comprehensively updated at least every three years. A new 6-year Transportation Improvement Program (TIP) must be approved every two years. Typically, however, the CLRP has been amended every year, along with the creation of a new TIP. Each new TIP and CLRP requires an air quality conformity determination, and this is where the process ran into problems in 2001.

	2001	2002
<p><b>The Approved Plan and Program</b> These are the approved documents under which the region continued to receive transportation funding throughout 2001.</p>	<p><b>2000 CLRP Triennial Update</b> 10/00 TPB approved CLRP update and TIP.</p> <p><b>FY2001-06 TIP</b></p>	<p>1/01 Federal agencies approved CLRP update and TIP.</p>
<p><b>The Drafts That Were Put On Hold</b> These draft documents were put on hold in 2001 because of air quality issues.</p>	<p><b>2001 CLRP Amendments</b> 6/01 Drafts put on hold due to an inability to make an air quality conformity determination.</p> <p><b>FY2002-07 TIP</b></p>	<p>12/01 Drafts released for public comment, along with proposed Transportation Emissions Reduction Measures, which were not yet funded.</p> <p>7/02 TPB approved CLRP amendments (renamed 2002 CLRP Amendments) and TIP (renamed FY2003-08 TIP), along with TERMS and conformity finding.</p>
<p><b>The Next Scheduled Update</b> This is the next scheduled triennial update of the CLRP and the TIP that would accompany it.</p>	<p><b>2003 CLRP Triennial Update</b> Mid 2002— Development process will begin for 2003 CLRP update.</p> <p><b>FY2004-09 TIP</b></p>	



Compressed natural gas buses are another way to reduce emissions.

WMATA

Nevertheless, the TPB decided that transportation solutions had to be put on the table. In December, the board released for public comment a comprehensive package of TERMS that could be implemented to meet the requirements of the air quality improvement plan. Ten TERMS were identified as “primary candidate measures.”

In July 2002, after a year of delay, the TPB finally approved a package of solutions to the conformity problem. This package permitted the TPB to make a conformity finding, and thereby approve amendments to the CLRP and a new TIP. The predicted NOx excess in 2005 was addressed through a four-part

2003	2004
1/03 TIP will expire.	1/04 CLR update will expire.
9/03 2003 CLR Triennial Update & FY 2004-09 TIP are scheduled to be approved by TPB.	1/04 CLR Update scheduled to be approved by federal agencies.

solution: 1) vehicle miles of travel (VMT) by heavy-duty vehicles on local roads were recalculated based upon new survey data; 2) credit was taken for previously committed measures, such as park-and-ride lots, sidewalks, and expanded bus services; 3) predicted emissions were reduced after 100 lane-miles of Virginia roads were cut from the 6-year program due to a funding shortfall; and 4) a package of TERMS was approved. The approved TERMS included a traffic signal optimization program, transit improvements and incentives, clean-burning buses and government vehicles, and projects to encourage bicycling, walking, telecommuting and ridesharing.

## WHAT MIGHT THE FUTURE HOLD?

The conformity problem of 2001 was not simply an isolated, one-time event. It was also a bellwether of the uncertainties awaiting transportation planning in the future.

One major change will be new air quality planning requirements. In January 2002, the U.S. Environmental Protection Agency issued a notice that air quality plans across the country must be comprehensively revised using a new tool—the MOBILE6 model—for estimating mobile emissions. This new tool will be used to determine new limits on transportation-related emissions to be incorporated into a revised air quality plan for the Washington region.

Many other factors might also affect conformity down the road. New federal standards of air quality testing—the 8-hour standard—will have an impact. Technological improvements, such as fuel cell-operated vehicles, might reduce emissions in the future. Continued transportation funding shortfalls could affect the region’s ability to build transportation projects that might affect air quality — either positively or negatively. Funding problems could also limit the implementation of emissions reductions measures.

Throughout 2001, regional leaders worked to remove the immediate obstacles from the planning process, while heeding the bellwether that was warning them of new challenges ahead. All the time, the clock was ticking. After a year of delay, the TPB did make a conformity finding in July 2002, six months before the TIP would have expired in January 2003. But regional leaders knew that unknown —and potentially more daunting— air quality challenges would await them in the future.



# ONGOING EFFORTS: OUTREACH, ANALYSIS, AND EXPANDED TRAVEL CHOICES

## ONGOING EFFORTS: OUTREACH, ANALYSIS, AND EXPANDED TRAVEL CHOICES

The TPB continued to develop and implement programs in 2001 that broadened outreach, pursued new types of analysis and expanded travel choices.



*Looking at the concerns of low-income, minority and disabled persons*

### 'ACCESS FOR ALL' COMMITTEE GETS TO WORK

The Access for All Advisory Committee's first annual report to the TPB included a call for more transit information in different languages and a reminder that the needs of bus riders must not take a "back-seat" as the region grapples with the Metro system's funding shortfall.

The advisory committee, whose members were appointed by the TPB in May of 2001, developed its 2001 report to provide guidance to the region's decision makers on transportation priorities for low-income and minority communities, and persons with disabilities. The committee includes leaders from community organizations across the region and representatives from major transportation implementing agencies. The group is chaired by Peter Shapiro, Prince George's County councilmember and vice chair of the TPB.

The 2001 Access for All report included three key recommendations, focusing on near-term priorities:

▲ **Transit information in different languages should be more extensively provided.**

The report noted that the Washington region has become one of the top immigration destinations in the country. This population is very diverse—speaking as many as 193 different languages—and is widely dispersed throughout the region. These people are highly dependent upon public transportation, but often do not have sufficient information to use the system.

▲ **Adequate funding for regional and local, community-based bus services should be provided.**

The committee noted “it often appears that within most decision-making arenas and in the media, the needs of Metrorail have received far more attention than the needs of the region’s bus systems.” The report emphasized the importance of bus services to low-income and minority people who depend upon buses not just to get to work, but also to travel to social-services, shopping and other essential destinations.



The committee said it was encouraged that WMATA was performing a regional bus study. But the report asked that “regional leaders remain vigilant that funding for regional and local, community-based bus services should not be ignored.”

▲ **Existing transportation services for low-income and minority communities and persons with disabilities should be improved and expanded.**

Finally, the committee suggested improvements in specific transportation services, including WMATA’s *Access to Jobs and Reverse Commute* program and the *MetroAccess* program serving disabled people. The committee also emphasized that *pedestrian and bicycle safety programs* have a special relevance for low-income, minority and disabled persons. The report noted that “Bus riders inevitably become pedestrians in the course of their journeys, and face the daily hazards of crossing poorly lit roads at night and waiting at unsafe bus stops. Immigrants are especially at risk as they seek to find their way through unfamiliar places and are often unsure of general safety guidelines in this country.”



## CITIZENS ADVISORY COMMITTEE

The TPB's Citizens Advisory Committee continued its public outreach meetings throughout the region in 2001. The public forums focused on the regional transportation funding shortfall. Citizens were asked about their transportation priorities and how the funding crisis could be solved. CAC Chairman Bob Chase (right), TPB Vice Chairman Phil Mendelson (standing, lower right) and CAC member Lee Schoenecker (sitting, lower right) participated in a CAC outreach meeting with the League of Women Voters in November.



## BICYCLE AND PEDESTRIAN ACTIVITIES



WASHINGTON AREA BICYCLIST ASSOCIATION

Hundreds of bicycle commuters joined D.C. Mayor Anthony Williams on May 4, 2001, for Bike to Work Day. The annual event is cosponsored by the TPB's Commuter Connections, which promotes bicycling as an alternative to driving.



WASHINGTON AREA BICYCLIST ASSOCIATION

From Occoquan, Virginia, to the Monocacy River in Frederick, Maryland, the region is seeing major progress on the greenways projects featured in the TPB's report "Priorities 2000: Metropolitan Washington Greenways." Pictured above is a ground-breaking at the Metropolitan Branch Trail in Northeast D.C. The trail will eventually be linked to the Crescent Trail on the west to form a "Bicycle Beltway" around Washington.



*TPB promotes working away from the office*

## **TELEWORKING SURPASSES EXPECTATIONS**

**T**he number of people working at home or in satellite locations is growing faster than previously anticipated, according to a new “State of the Commute” survey conducted by the TPB’s Commuter Connections program in 2001. The survey also revealed the latent potential for an even greater growth in teleworking.

The new survey results show that 15 percent of the regional workforce is teleworking an average of 1.5 days per week, compared with 12 percent in 1998—an increase of 25 percent in the past three years.

The new data indicate that telework reduces air pollution more than was previously thought. The State of the Commute Survey also suggests that the region has the potential to get many more employees to telework. Approximately 700,000 of the non-telecommuters have telework-appropriate job responsibilities. The survey shows that 475,000—or 21 percent of all non-telecommuters—would like to telework at least one day per week.

The survey highlighted the latent potential for teleworking with federal agencies and large private sector firms. Twenty-six percent of federal employees who do not currently telework have telework-appropriate job responsibilities and would like to do it, while



28 percent of employees from large private sector firms could and would telework if given the opportunity.

The Commuter Connections programs, which are administered through the TPB, provide services to reduce congestion and improve air quality. In addition to promoting telecommuting, Commuter Connections provides ride-matching services, the “Guaranteed Ride Home” program, and assistance to employers in setting up alternative commute programs.



**With teleworking, employees work at home or at a local telework center one or more days per week. Telework centers, like the one pictured above, provide professional work environments at 17 locations around the region.**

*Regional Mobility and Accessibility Study gets started*

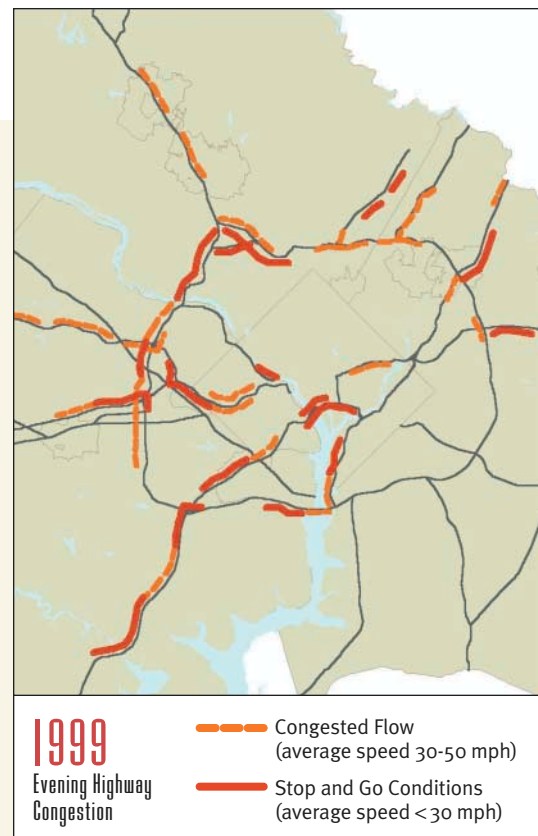
## LOOKING AT ALTERNATIVE FUTURES

**W**hat if a rail transit line circled the region? What if new bridges crossed the Potomac? What if the eastern side of the region had a boom in employment? How would the region be different if these or other things happened?

Questions like these will be examined in a major study that the TPB launched in 2001. The Regional Mobility and Accessibility Study will analyze a number of different scenarios for potential transportation and land use alternatives over the next 25 years, including highway and transit options.

Early in the year, a technical group got to work developing criteria—called “measures of effectiveness”—that will be used to evaluate the different scenarios. These measures will be closely linked to the eight goals of the TPB Vision, the transportation policy framework adopted in 1998. For example, Goal 5, Objective 3 of the Vision called for “increased transit, ridesharing, bicycling and walking mode shares,” and therefore, the Regional Mobility and Accessibility Study will examine how different transportation/land use scenarios might affect the degree to which people might use these different modes of travel.

By the beginning of 2002, the TPB had developed a draft set of measures of effectiveness for the study and was ready to begin the analysis of the baseline scenario, using the

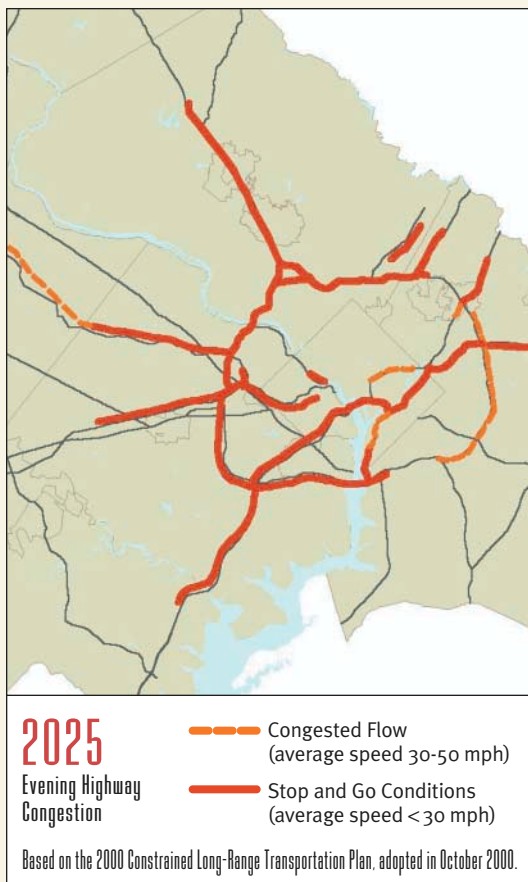


**These two maps show that congestion is expected to increase significantly in the next 25 years with the transportation system approved in the 2000 CLRP. The Regional Mobility and Accessibility Study will examine how different scenarios for transportation and land use development could affect these congestion levels and other measures of effectiveness in the future.**

transportation system laid out in the 2000 Constrained Long-Range Plan (CLRP). In addition, the TPB directed staff to analyze the effects of implementing a “congestion management system,” including a major, long-term package of improvements in management and operations. This same package of congestion management improvements will be applied to all of the scenarios tested in the study.

The comprehensive nature of the study means it touches upon a number of critical

issues, and therefore its development process has been painstaking. From its inception, one of the most controversial issues was the question of new Potomac River bridges. In initiating the project, the TPB unanimously agreed upon language that directed the study to “include the identification of ‘*additional highway and transit circumferential facilities and capacity, including Potomac River crossings where necessary and appropriate, that improve mobility and accessibility between and among regional activity centers and the regional core*’ (TPB Vision, Goal 2, Strategy 5) and that take into consideration the adopted land use plans of individual jurisdictions.” (Italicized language taken from the TPB Vision, adopted in 1998.)



### The TPB Looks at Induced Travel

## BUILD IT, AND THEY WILL COME?

Induced travel—also called induced demand—has become a catch-phrase in the transportation planning world in recent years. Opponents of new roads often warn that new or widened highways simply induce new traffic, which quickly overwhelms congestion relief. Road supporters respond that this argument has been greatly exaggerated.

The topic was brought home by a *Washington Post* article on January 4, 1999, which highlighted congestion that has developed on I-270 in Montgomery County, despite a widening in 1984. That article described a debate among transportation analysts as to whether the I-270 congestion largely resulted from induced demand or was due to other factors, including a growing population and robust economy.

The TPB directed staff in 1999 to examine the topic of induced travel and how it is addressed in the COG/TPB travel forecasting process. In 2001, staff presented a briefing paper on induced travel based on staff research and a consultant’s nationwide review of academic literature and studies.

This research found that national experts generally define induced travel as “any increase in total daily travel over an entire transportation system that results from a change in transportation system capacity.” This definition limits induced travel to entirely new travel—new or longer trips.

According to this definition, induced travel would not include diverted trips, mode shifts or trip timing changes, because these changes



in travel patterns do not result in an increase in total daily travel over the entire transportation system. The definition also does not count shifts resulting from factors other than transportation capacity changes—including demographic factors such as underlying population and employment growth, or socio-economic factors like the increasing number of “soccer moms” hauling their children to and from organized sporting activities.

Although major highway improvements are most commonly linked to induced travel, the TPB staff research showed that other capacity changes can induce travel demand, including extended Metrorail lines, new bike paths or incremental arterial improvements such as new left-turn lanes, bus stops or traffic synchronization.

The TPB staff briefing paper concluded that the COG/TPB travel forecasting process is “state of the practice” in addressing induced



travel, but does not separate it from other increases in travel.

As a case study, the TPB staff examined travel shifts on I-270 following its widening in 1991. In order to find out how much of the growth in traffic can be attributed to induced travel, the analysis compared a 1984 forecast of traffic volumes with actual year 2000 conditions. This comparison showed that traffic in 2000 had already reached the volumes that were forecast for 2010. However, the analysis found that these high traffic volumes appear to be due in large part to shifts in population, employment, and travel to the I-270 corridor from other areas in the region, rather than to entirely new (induced) travel.

Population and employment forecasts were particularly revealing. When compared with the present, the regionwide forecasts from 1979 were found to be roughly on target. But for the I-270 corridor, growth was significantly higher than what was forecast, while in other locations, growth was much lower. (See chart on next page.)

The growth in jobs and population in the I-270 corridor can be attributed to a number of factors, including many broad socio-economic changes across the region, as well as transportation investments in the corridor, including the construction of the Metrorail Red Line, the 12-mile widening of I-270, and other improvements, all of which may have affected the location decisions of employers and developers. Development along the corridor may also have been influenced by the fact that east-west circumferential transportation facilities, which had been planned, were never built.

The study recognizes that induced demand exists, and can occur in all modes. And

## Comparison of Round 6.2 and Round 2 Cooperative Forecasts\* Year 2000: Employment (In Thousands)

Jurisdiction	Round 6.2 Year 2000	Round 2 Year 2000	Difference Rnd 6.2-Rnd 2	Percent Difference
District of Columbia	678	701	-23	-3%
Arlington County	201	198	3	2%
City of Alexandria	99	80	19	24%
Montgomery County	533	440	93	21%
In I-270 Corridor <small>(included in Montgomery County total above)</small>	282	194	88	45%
Outside I-270 Corridor <small>(included in Montgomery County total above)</small>	251	246	5	2%
Prince George's County	329	426	-97	-23%
Fairfax County/Cities	565	410	155	38%
Loudoun County	85	58	27	47%
Prince William County/Cities	114	84	30	36%
<b>Total</b>	<b>2604</b>	<b>2397</b>	<b>207</b>	<b>9%</b>

\*Round 6.2 Forecasts adopted in 2000 and Round 2 Forecasts adopted in 1979

**What was predicted for the year 2000 and what really happened? This chart shows that regionwide forecasts for employment were roughly on target, but job growth in the I-270 corridor was much higher than what was predicted.**

contrary to an often-expressed view, it is simplistic to impute a negative value onto all induced travel. A new trail, which induces people to buy a bicycle and go for a ride, is clearly a “good thing.” The value of other forms of induced travel may be less obvious. A new highway might induce new and longer trips as well as redistribute existing travel. A new commuter rail line might get commuters out of their cars, but it could also

lure them to live in more remote locations, which might induce longer non-work trips. Both induced and redistributed travel can produce positive and negative repercussions. The key policy question facing decision-makers is whether those transportation investments under consideration will produce the kinds of travel—induced or otherwise—that will benefit people and communities.



## SHARPENING OUR TRANSPORTATION FUNDING PRIORITIES

**F**rustration. That was the feeling of many TPB members after they approved the 2000 Constrained Long-Range Transportation Plan (CLRP) in October of 2000. The plan included very few new facilities because the money simply was not there. What's worse, funding in the plan was barely sufficient to maintain the transit and highways systems already in place.

The magnitude of the region's funding problem was quantified during the update of the 2000 CLRP. Estimates show that \$3 billion per year in constant dollars will be available during the next 25 years for projects in the plan—including highways, public transit, pedestrian/bicycle facilities and other projects. But according to the TPB's analysis in 2000, the region would need an additional \$1.74 billion per year—an increase of more than 50 percent—to meet rehabilitation and expansion needs.

"Obviously, the transportation system in the Washington area is in crisis," TPB Chairman John Mason told the *Washington Post* in February of 2001.

An aggregate picture of the transportation funding shortfall was presented at the TPB's first annual summit at Union Station in November of 2000. Throughout 2001, regional leaders worked to sharpen the region's transportation priorities and develop a list of "must-do" regional needs.

Three top regional concerns emerged from this prioritization process. They were presented to federal and state legislators at the TPB's second annual summit, called the "Report to the Region," on November 28, 2001. These priorities focused on the Metro system, emergency preparedness and air quality.



## RECOGNIZING METRO'S SUCCESSSES AND NEEDS

The 25th anniversary of Metrorail brought praise for the system's successes and concern about its future. "We built it and they came—and they're still coming," said Katherine Hanley, chairman of the Fairfax County Board of Supervisors, in a *Washington Post* series on Metro in March. Metrorail has repeatedly broken its own ridership records in recent years. Today the rail system ranks second only to New York in the number of riders it serves. The Metrobus system ranks fifth nationwide.

This success story has its downside. Platforms are packed and passengers are squeezed. The system is no longer new, and just like any mature investment, more funding is needed for rehabilitation and maintenance, and to provide vehicles and facilities to accommodate new riders.

In April of 2001, the TPB called for increased funding for the region's rail transit system. The board unanimously approved a resolution recognizing the tremendous success of Metrorail and declaring the system's preservation, rehabilitation and expansion to be a regional priority.

The TPB focused attention on the need to rehabilitate and maintain the rail transit system. According to the 10-year capital plan of the Washington Metropolitan Area Transit Authority (WMATA), a substantial portion of these needs would not be met in the near future, given current funding. The capital plan showed that \$40 million in additional funding would be needed in 2006, \$100 million in 2007 and \$150 million in 2008 and beyond. The total unfunded need for rehabilitation and maintenance funding for Metro was estimated at \$9.8 billion through 2025.

Funding was also needed to handle new riders on the Metro system. During development of the 2000 CLRP, the TPB estimated that an additional \$140 million per year was needed to accommodate ridership growth over the next 25 years—funding needed to purchase buses and trains, and to improve stations and other facilities. None of this funding was identified in the 2000 CLRP.

TPB Second Vice Chairman Peter Shapiro presented these Metro needs at the Union Station meeting on November 28. Mr. Shapiro placed particular emphasis on the importance of bus service, especially for low-income and minority communities. "Quite simply, Metro-rail won't work without bus access," he noted.



**The TPB officers made presentations at the November 28 Union Station meeting on regional funding priorities. Pictured from left to right are Vice Chairman Peter Shapiro of the Prince George's County Council, Vice Chairman Phil Mendelson of the District of Columbia Council and TPB Chairman John Mason, mayor of the City of Fairfax.**

## EMERGENCY MANAGEMENT AND AIR QUALITY ALSO PRIORITIES

In addition to Metro, two other priorities were highlighted at the Union Station meeting on November 28: emergency preparedness and air quality. TPB Chairman John Mason told attendees that the events of September 11 demonstrated the importance of transportation management and operations improvements. "We have been working hard to answer the question 'what

## Funding Priorities

The Transportation Planning Board identified three “must-do” priorities in 2001:

- 1. Emergency Preparedness.** The regional transportation system must be prepared to handle potential future emergencies. Needed improvements include better communications systems, traffic control devices, and cameras and monitoring equipment.
- 2. Metro System Rehabilitation and Maintenance.** The total unfunded need for Metro’s rehabilitation and maintenance is \$9.8 billion through 2025. The system also needs \$140 million per year for facilities and equipment to accommodate new riders.
- 3. Air Quality Measures.** Under federal law, the TPB must ensure that the region’s 25-year Constrained Long-Range Plan (CLRP) and 6-year Transportation Improvement Program (TIP) are in “conformity” with emissions limits established in the region’s air quality improvement program. An analysis in 2001 predicted that emissions limits would be exceeded in 2005. If this projected problem were not addressed, federal transportation funding could be jeopardized.

do we need to do now in case something happens tomorrow?” Chairman Mason said. “We are now working on a shorter-term basis to make decision-making smoother in a crisis and to improve communications among involved agencies and also with the public.”

TPB First Vice Chairman Phil Mendelson spoke on air quality issues, explaining that transportation emissions were projected to exceed limits for 2005 established in the region’s air quality plan. Unless actions were taken to mitigate these emissions, federal law prohibited the region from adding new highway and transit capacity projects that affect air quality to its transportation plan.

Even after tackling the top three priorities—Metro rehabilitation, emergency preparedness and air quality—the TPB leadership noted that the region still would need an additional \$1.5 billion per year to tackle gridlock on the

highway and transit systems. These unfunded needs include highway and bridge maintenance. They also include new transit lines and highway capacity to accommodate the region’s increasing population and growing economy.

The presentations at the Union Station meeting on November 28 culminated by reiterating a key principle about funding from the Vision, the TPB’s policy framework adopted in 1998. According to Goal 7 of the Vision, the region needs “an enhanced funding mechanism(s) for regional and local transportation system priorities that cannot be implemented with current foreseeable federal, state and local funding.” TPB leaders emphasized that federal involvement will continue to be essential in addressing these priorities. They also stressed that cost sharing will be vital—among federal, state, local and private sources, as well as with users.

## CONGRESSIONAL LEADERS RESPOND

Congressional representatives at the Union Station meeting told attendees that the federal government will do its share, but the region needs to do more to help itself. “It’s naive to think that the federal government is going to be a gravy train that by itself will solve these problems,” said Congressman Tom Davis of Virginia. “We’ve got to look to localities to ante up more than they have.”

Congresswoman Eleanor Holmes-Norton of the District of Columbia noted the urgency of the issues discussed at the meeting. “The ‘coming’ crisis has finally come,” she said. “I certainly hope that message will be understood by the executive leadership in this region—the governors and the mayor.”

Virginia Congressman Jim Moran said that institutional obstacles are blocking the region’s



**Congressional representatives said the federal government remains committed to the region, but jurisdictions must do more to help themselves. Pictured from left to right are Senator John Warner, Congressman Frank Wolf, Congressman Jim Moran, Congresswoman Eleanor Holmes-Norton and Congressman Tom Davis.**

transportation needs from being solved. “I think we need a transportation authority that prioritizes our transportation needs, that can receive money, and can issue bonds,” said Mr. Moran. “I don’t even think we should try to get taxing authority, and no legislation has contemplated that. But the TPB needs to be more empowered than it is now... The fact is, it’s much easier to fund a credible and effective regional organization than it is to distribute money in any other way for this region.”

“We’re going to have an unmitigated disaster if we don’t take the bull by the horns now,” Congressman Moran added.

The congressional representatives also emphasized the continuing federal commitment to the regional transportation system. Virginia’s Congressman Frank Wolf described projects that he and the delegation have promoted, including telecommuting and funding for mass transit to Dulles Airport. And speaking broadly about the immensity of the region’s transportation needs, Senator John Warner of Virginia said, “We will do our best to meet the challenge.”

### **THE FUNDING SHORTFALL: A CONTINUING THEME**

In elevator chat and conversations over dinner, people complain about congestion and yearn for solutions. Increasingly, it is becoming clear that additional funding is needed to deal with these problems.

Several initiatives in 2001 attempted to make a dent in the funding shortfall. In the first part of the year, Maryland and the District of Columbia boosted short-term appropriations to meet short-term transportation needs. In Virginia, legislation was developed to enable a transportation sales tax referendum in Northern Virginia.

But a looming recession in the fall of 2001 further squeezed transportation funding. The uncertainties arising from September 11 drove home the message that the region must deal urgently with our most pressing needs.

In assuming the 2002 TPB chairmanship, D.C. Councilmember Phil Mendelson said the fundamental priority for the new year should continue to be finding ways to deal with the transportation funding shortfall. “I’m hopeful that this year we can devote continued attention to looking at how we can possibly crack this nut,” he told the board on January 16, 2002.

Chairman Mendelson emphasized that the concerns laid out at the Union Station summit on November 28 remained central—including emergency response, air quality challenges, and Metrorail preservation and rehabilitation. “There’s no way we can avoid any of these issues. They’re all critical for an efficient transportation system,” he said.

“But it’s my view that underlying each of these priorities is a question of funding. And so that is the fundamental priority for 2002.”



## The Policy Goals of the TPB Vision

Adopted in 1998, the Vision is the policy framework guiding the work of the Transportation Planning Board.

- 1 The Washington metropolitan region's transportation system will provide reasonable access at reasonable cost to everyone in the region.
- 2 The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, services and recreation in a walkable environment.
- 3 The Washington metropolitan region's transportation system will give priority to management, performance, maintenance, and safety of all modes and facilities.
- 4 The Washington metropolitan region will use the best available technology to maximize system effectiveness.
- 5 The Washington metropolitan region will plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources, and communities.
- 6 The Washington metropolitan region will achieve better inter-jurisdictional coordination of transportation and land use planning.
- 7 The Washington metropolitan region will achieve enhanced funding mechanisms for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.
- 8 The Washington metropolitan region will support options for international and inter-regional travel and commerce.

# MEMBERSHIP OF THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD





**METROPOLITAN WASHINGTON  
COUNCIL OF GOVERNMENTS**

777 North Capitol Street NE  
Suite 300

Washington, DC 20002-4239  
(202) 962-3200

Internet: [www.mwcog.org](http://www.mwcog.org)