

TRANSPORTATION IMPROVEMENT INITIATIVES ENDORSED BY THE TPB

A Call For Action To Jurisdictions And Transportation Agencies

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Commuter Connections Subcommittee
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What did the TPB do?

Issued a call for action to region's jurisdictions and transportation agencies to:

- Help improve performance of the region's transportation system
- Develop projects, programs or policies that advance the concepts represented by...
- Five initiatives endorsed by the National Capital Region Transportation Planning Board



Why this call for action?

Current long-range transportation plan projected to yield dissatisfactory levels of performance by 2040:

- Majority (64%) of population will not be in close proximity to high-capacity transit
- Single-occupant vehicle will be predominant mode of work trips in inner (61%) and outer (76%) suburbs
- Daily transit trips will constitute lowest proportions in inner (7%) and outer (2%) suburbs
- Congested lane miles will increase by 66% relative to today
- Total vehicle hours of delay will increase by 74% relative to today
- Average delay per vehicle trip will increase by 47% relative to today



What are the five initiatives?

Comprehensive mix of projects, programs and policies that will:

- Optimize and balance land use throughout the region
- **Implement enhanced travel demand management strategies consistently throughout the region**
- Operate bus rapid transit, light rail, and streetcars throughout the region
- Enhance Metrorail capacity in the region's core
- Provide a regional network of express lanes with express bus services that exempt high-occupancy vehicles from tolls



How were these five identified?

- TPB's task force made up of elected officials, senior technical representatives, and representatives from citizen advisory committees
- Considered region's transportation goals and challenges to achieving transportation goals
- Examined past scenarios studies
- Brainstormed ideas for projects, programs and policies, and bundled mutually supportive strategies
- Selected quantitative and qualitative performance indicators
- Sketch planning analysis of 10 "bundled" initiatives
- Task force recommended five initiatives to TPB
- Consensus by TPB endorsed the five initiatives

<https://www.mwcog.org/committees/lrptf/>



Performance indicators for analysis

Quantitative Measure	Expressed as
Travel Time	Average commute travel time per trip for single-occupant vehicle (SOV), high-occupancy vehicle (HOV), and transit
Traditional Congestion	Daily vehicle hours of delay
Accessibility by Transit	# of jobs accessible within 45 min transit commute
Accessibility by Auto	# of jobs accessible within 45 min car commute
Mode Share (Work Trips)	SOV, HOV, transit, bicycle/pedestrian, telework
VMT	Amount of daily vehicle miles travel (VMT) and VMT per capita
Reliable Travel	Share of miles traveled on reliable modes (e.g., express lanes, BRT, transit rail, commuter rail)
Transit Options for Households	Share of households in high capacity transit zones
Transit Options for Employment	Share of jobs in high capacity transit zones
Mobile Source Emissions	VOC, NO _x , and CO ₂

Qualitatively Assess Each Challenge

Road Congestion

Transit Crowding

Inadequate Bus Service

Access to Bike/Ped Options

Development around Metrorail

Housing & Job Location

Metrorail Repair Needs

Roadway Repair Needs

Incidents and Safety

Pedestrian & Bicyclist Safety

Environmental Quality

Open Space Development

Bottlenecks

Reliable Access to Intercity Hubs



Amplified employer-based travel demand management

Components And Assumptions For Analysis

- Substantial increase in telework and flexible schedule adoption
 - 20% telework share (yields about 15% reduction in work trips from base)
- Expanded employer-based transit/vanpool benefits
 - Transit/vanpool subsidies averaging \$50 per month are provided by 80% of employers
- Increase in priced parking in major activity centers
 - 90% of parking for work-trips in activity centers is priced (pricing varies by location; \$4/day minimum).



The case for Enhanced TDM

Quantitative MOEs	2040 CLRP	Initiative	Change from CLRP
Travel Time: average travel time per commute trip			
Single occupant vehicle (SOV)	50.7	48.5	-4%
High-occupancy vehicle (HOV)	58.9	55.2	-6%
Transit	53.9	54.8	<1%
Vehicle Hours of Delay			
Daily vehicle hours of delay	1.85 million	1.39million	-24%
Jobs Accessibility			
Transit: # of jobs accessible within 45-min transit commute	523,000	523,000	0%
Auto: # of jobs accessible within 45-min auto commute	876,000	922,000	10%
Commute Mode Share			
Single occupancy vehicle (SOV)	58.1	53.2*	-8%*
High-occupancy vehicle (HOV)	11.6	14.3*	24%*
Transit	24.6	26.0*	6%*
Bicycle/Pedestrian	5.6	6.5*	16%*
Reliable Trips			
Share of passenger miles on reliable modes	11.5%	11.2%	-3%
Vehicle Miles Traveled (VMT)			
Daily VMT	141.91 million	133.61 million	-6%
Daily VMT per capita	21.2	19.9	-6%
Transit Options			
Share of households in zones with high-capacity transit	39.9%	39.9%	0%
Share of jobs in zones with high-capacity transit	57.7%	57.7%	0%

The case for Enhanced TDM

Challenges	Compared to CLRP
Road Congestion	
Transit Crowding	
Inadequate Bus Service	
Access to Bike/Ped Options	
Development around Metrorail	
Housing & Job Location	
Metrorail Repair Needs	
Roadway Repair Needs	
Incidents and Safety	
Pedestrian & Bicyclist Safety	
Environmental Quality	
Open Space Development	
Bottlenecks	
Reliable Access to Intercity Hubs	

KEY:	High	Medium
	Low	Neutral
		Negative



Enhanced TDM initiative relative to others

	BASE	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
QUANTITATIVE MOES	2040 CLRP	Express Travel Network	Operational Improvements & Hot Spot Relief	Add'l North Bridge	BRT and Transitways	Commuter Rail	Metrorail Core Capacity	Transit Rail Extensions	Regional Land-Use Balance	Transit Fare Policy Changes	Travel Demand Management
Travel Time (SOV)	50.7	-2%	-4%	0%	-1%	-1%	-2%	-1%	-5%	0%	-4%
Travel Time (HOV)	58.9	-5%	-4%	-1%	-1%	-1%	-1%	-1%	-6%	<1%	-6%
Travel Time (Transit)	53.9	-1%	-2%	<1%	-1%	<1%	-6%	<1%	-5%	1%	<1%
Daily Vehicle Hours of Delay	1.85 million	-11%	-8%	-3%	-2%	-2%	-9%	-3%	-19%	-3%	-24%
Jobs Accessible by Transit	523,000	2%	2%	<1%	4%	1%	19%	10%	10%	0%	0%
Jobs Accessible by Auto	876,000	5%	8%	1%	1%	<1%	2%	1%	10%	<1%	10%
Mode Share: SOV	58.1%	<1%	3%	<1%	-1%	-1%	-4%	-1%	-2%	<1%	-8%*
Mode Share: HOV	11.6%	-1%	-7%	0%	-1%	-1%	-5%	-3%	-4%	-2%	24%*
Mode Share: Transit	24.6%	1%	-4%	<1%	4%	2%	11%	5%	<1%	2%	6%*
Mode Share: Non-Motorized	5.6%	0%	0%	0%	<1%	<1%	<1%	<1%	29%	0%	16%*
Travel on Reliable Modes	11.5%	42%	-5%	-2%	6%	2%	9%	6%	0%	3%	-3%
VMT daily	141.91 million	<1%	2%	1%	<1%	<1%	-1%	-1%	-3%	-1%	-6%
VMT daily per capita	21.17	<1%	2%	1%	<1%	<1%	-1%	-1%	-6%	-1%	-6%
Share of Households in Zones with High-Capacity Transit	39.9%	0%	0%	<1%	25%	<1%	<1%	17%	9%	0%	0%
Share of Jobs in Zones with High-Capacity Transit	57.7%	0%	0%	<1%	15%	<1%	0%	13%	2%	0%	0%
VOC Emissions	18.9	0%	-3%	1%	-1%	0%	-2%	-1%	-4%	-1%	-8%
NOx Emissions	18.8	0%	0%	1%	0%	0%	-2%	-1%	-4%	-1%	-7%
CO ₂ Emissions	47,082.3	0%	-1%	1%	-1%	0%	-2%	-1%	-4%	-1%	-7%

*Mode shares reflect trips taken. Due to telework, actual number of transit trips declines; bicycle/pedestrian stays flat; HOV increases slightly.



Enhanced TDM initiative relative to others

	BASE	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
CHALLENGES	2040 CLRP	Express Travel Network	Operational Improvements & Hotspot Relief	Add'l Northern Bridge	BRT and Transitways	Commuter Rail	Metrorail Core Capacity	Transit Rail Extensions	Optimize Regional Land-Use Balance	Transit Fare Policy Changes	Travel Demand Management
Road Congestion		🟢	🟢	🟡	🟡	🟡	🟢	🟡	🟢	🟡	🟢
Transit Crowding	BASELINE	🟡	🟡	🟡	🟡	🟡	🟢	🟠	🟠	🟠	🟢
Inadequate Bus Service		🟢	🟡	🟡	🟢	🟡	🟡	🟡	🟡	🟡	🟡
Access to Bike/Ped		🟡	🟡	🟡	🟢	🟡	🟢	🟢	🟢	🟡	🟡
Development around Metrorail		🟡	🟡	🟡	🟢	🟡	🟡	🟢	🟢	🟡	🟡
Housing & Job Location	BASELINE	🟡	🟡	🟡	🟢	🟡	🟡	🟢	🟢	🟡	🟡
Metrorail Repair Needs		🟡	🟡	🟡	🟡	🟡	🟠	🟠	🟡	🟡	🟡
Roadway Repair Needs		🟠	🟠	🟠	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Incidents and Safety	BASELINE	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟢	🟡	🟢
Pedestrian & Bicyclist Safety		🟡	🟠	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡
Environmental Quality	BASELINE	🟡	🟡	🟠	🟡	🟡	🟡	🟡	🟢	🟡	🟢
Open Space Development		🟡	🟡	🟠	🟡	🟡	🟡	🟡	🟢	🟡	🟡
Bottlenecks		🟢	🟢	🟡	🟡	🟡	🟢	🟡	🟢	🟡	🟢
Reliable Access to Intercity Hubs		🟢	🟡	🟡	🟡	🟡	🟢	🟢	🟡	🟡	🟡

KEY

🟢 High
 🟡 Medium
 🟠 Low
 🟡 Neutral
 🟠 Negative

All assessments are in relation to 2040 CLRP baseline

How you can help

Advise the Transportation Planning Board:

- What strategies can the region pursue to realize the potential of the Enhanced TDM initiative?
- What policy actions would help realize anticipated change in travel demand?
- What commuter concerns would need to be addressed to successfully enact policy or implement a program?
- What specific actions can your regional program take to assist in this effort?
- What specific action can your jurisdiction take to assist in this effort?
- Any other considerations?



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National Capital Region
Transportation Planning Board

Ten improvement initiatives analyzed

Multimodal	Transit	Policy-Focused
1. Regional Express Travel Network	4. Regionwide High-Capacity Transitways	8. Optimize Regional Land Use Balance
2. Operational Improvements & Hotspot Relief	5. Regional Commuter Rail Enhancements	9. Transit Fare Policy Changes
3. Additional Northern Bridge Crossing/Corridor	6. Metrorail Regional Core Capacity Improvements	10. Amplified Travel Demand Management (for commute trips)
	7. Transit Rail Extensions	



REGIONAL TRANSPORTATION GOALS

- Provide a comprehensive range of transportation options to promote a strong regional economy and address regional congestion, accessibility and mobility
- Provide reasonable access at reasonable cost to everyone
- Develop and maintain an interconnected system, including a healthy regional core and dynamic activity centers with a mix of jobs, housing and services in a walkable environment
- Prioritize state of good repair: Give priority to asset management, performance, maintenance and safety of all modes and facilities
- Use the best available technology to maximize system effectiveness
- Plan and develop a system that enhances and protects natural environmental quality, cultural and historic resources and communities
- Achieve better inter-jurisdictional coordination of transportation and land use planning
- Achieve enhanced funding for regional and local priorities that cannot be met with current/forecast funding sources
- Support inter-regional and international travel and commerce



REGION'S TRANSPORTATION CHALLENGES 1

- **Roadway Congestion:** The region's roadways are among the most congested in the nation, making it harder for people and goods to reliably get where they need to go
- **Transit Crowding:** The transit system currently experiences crowding during peak hours and lacks the capacity to support future population and job growth without reducing ridership
- **Inadequate Bus Service:** Existing bus service is too limited in its capacity, coverage, frequency, and reliability, making transit a less viable option, especially for people with disabilities and limited incomes.
- **Housing and Job Location:** Most housing, especially affordable housing, and many of the region's jobs are located in areas outside of Activity Centers where transit, bicycling, and walking are not safe and viable options.
- **Development Around Metrorail:** Too many Metrorail stations, especially on the eastern side of the region, are surrounded by undeveloped or underdeveloped land, limiting the number of people who can live or work close to transit and leaving unused capacity in reverse-commute directions on several lines.
- **Environmental Quality:** Increasing amounts of vehicle travel resulting from population and job growth could threaten the quality of our region's air and water.
- **Unsafe Walking and Biking:** Too few people have access to safe pedestrian and bicycle infrastructure or live in areas where walking and bicycling are not practical options for reaching nearby destinations.

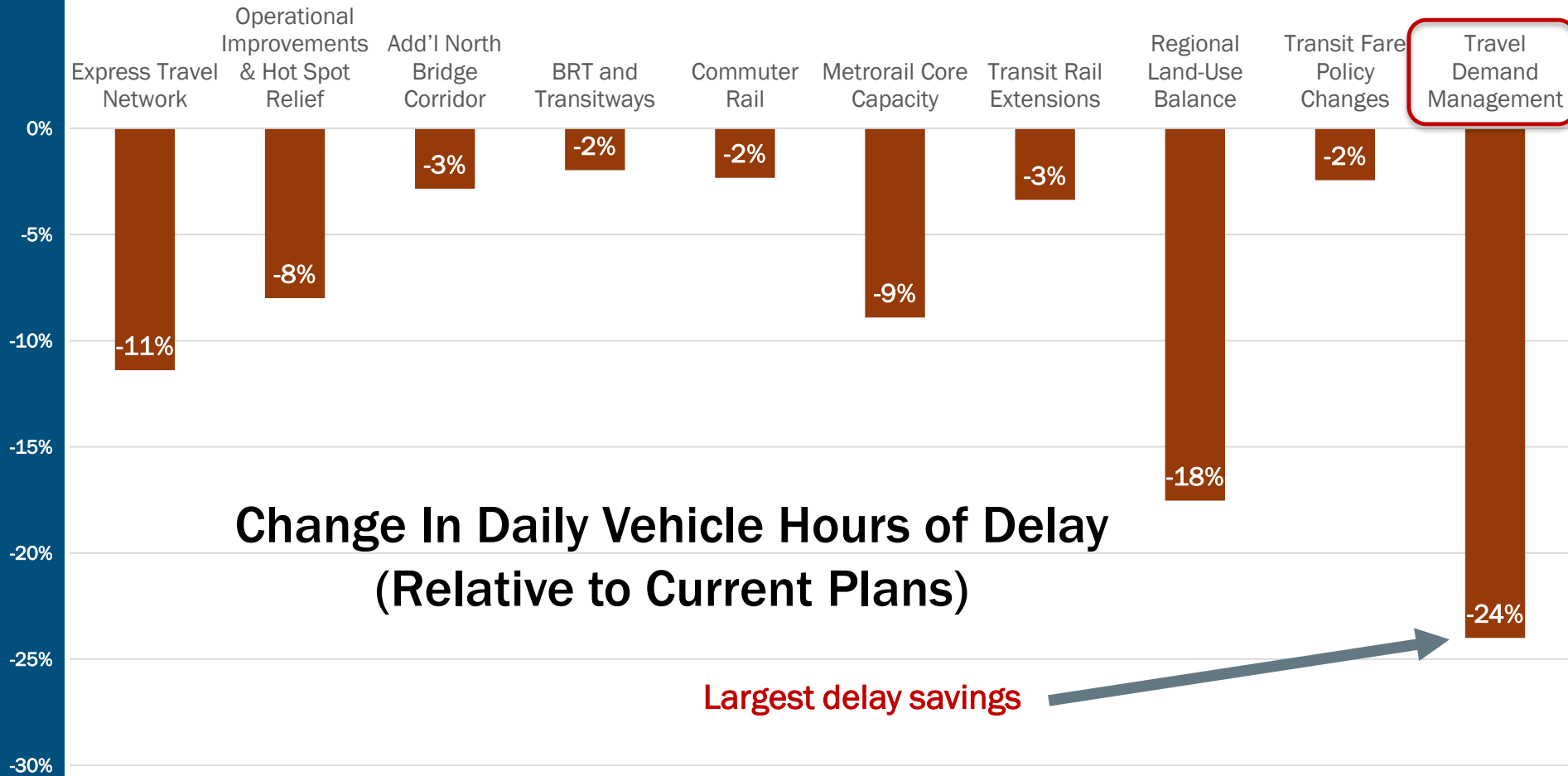


REGION'S TRANSPORTATION CHALLENGES 2

- **Bottlenecks:** Bottlenecks on the highway and rail systems cause delays in inter-regional travel for both freight and passengers, hurting the region's economic competitiveness.
- **Travel Time Reliability:** Travel times to and from the region's airports are becoming less reliable for people and goods movement.
- **Roadway Repair Needs:** Older bridges and roads are deteriorating and in need of major rehabilitation to ensure safe, reliable, and comfortable travel for cars, trucks, and buses.
- **Metrorail Repair Needs:** Deferred Metrorail maintenance over the years has led to unreliability, delays, and safety concerns today, as well as higher maintenance costs.
- **Incidents and Safety:** Major accidents and weather disruptions on roadways and transit systems cause severe delays and inconvenience. Reducing injuries and fatalities for all users of the transportation system must be prioritized, with particular focus on protecting vulnerable users.
- **Pedestrian and Bicyclist Safety:** The number of bicycle and pedestrian fatalities each year is holding steady even as the number of vehicle fatalities has declined steadily.
- **Open Space Development:** Wildlife habitat, farmland, and other open spaces are threatened by construction of new transportation facilities and residential and commercial development.

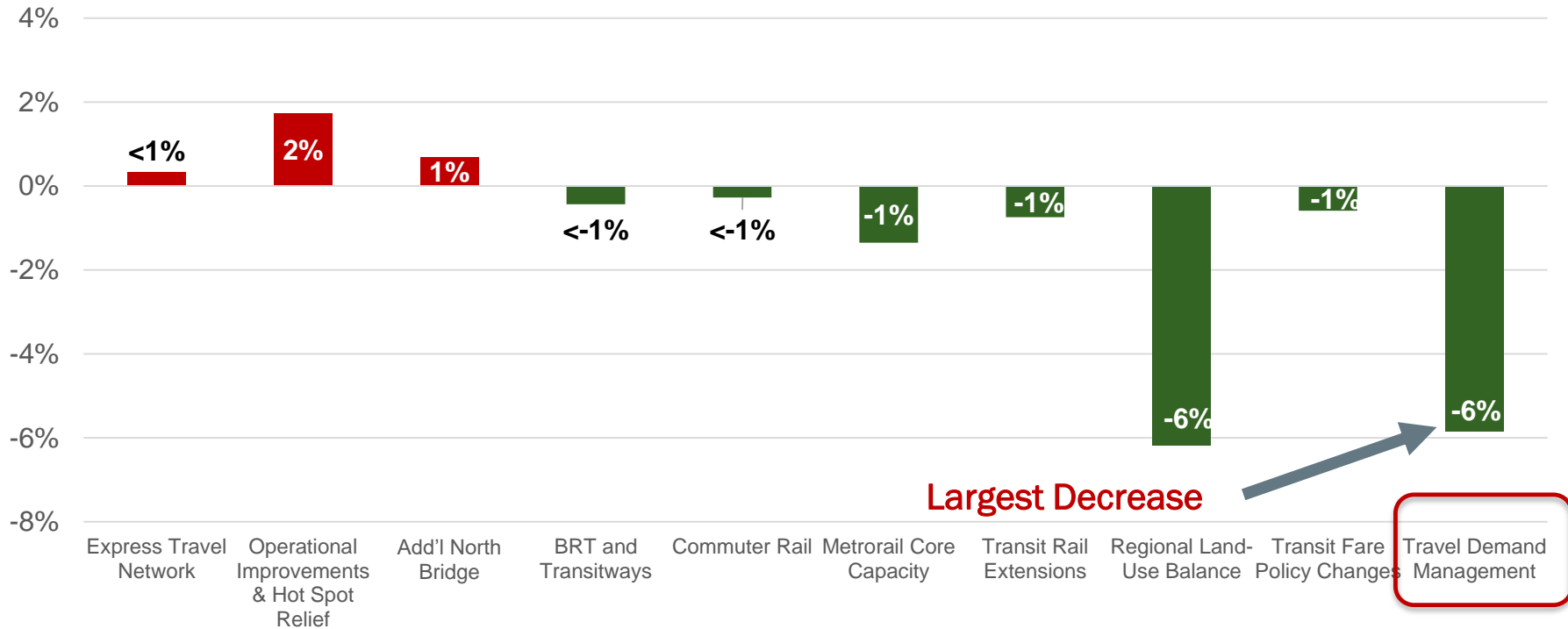


ENHANCED TDM INITIATIVE RELATIVE TO OTHERS



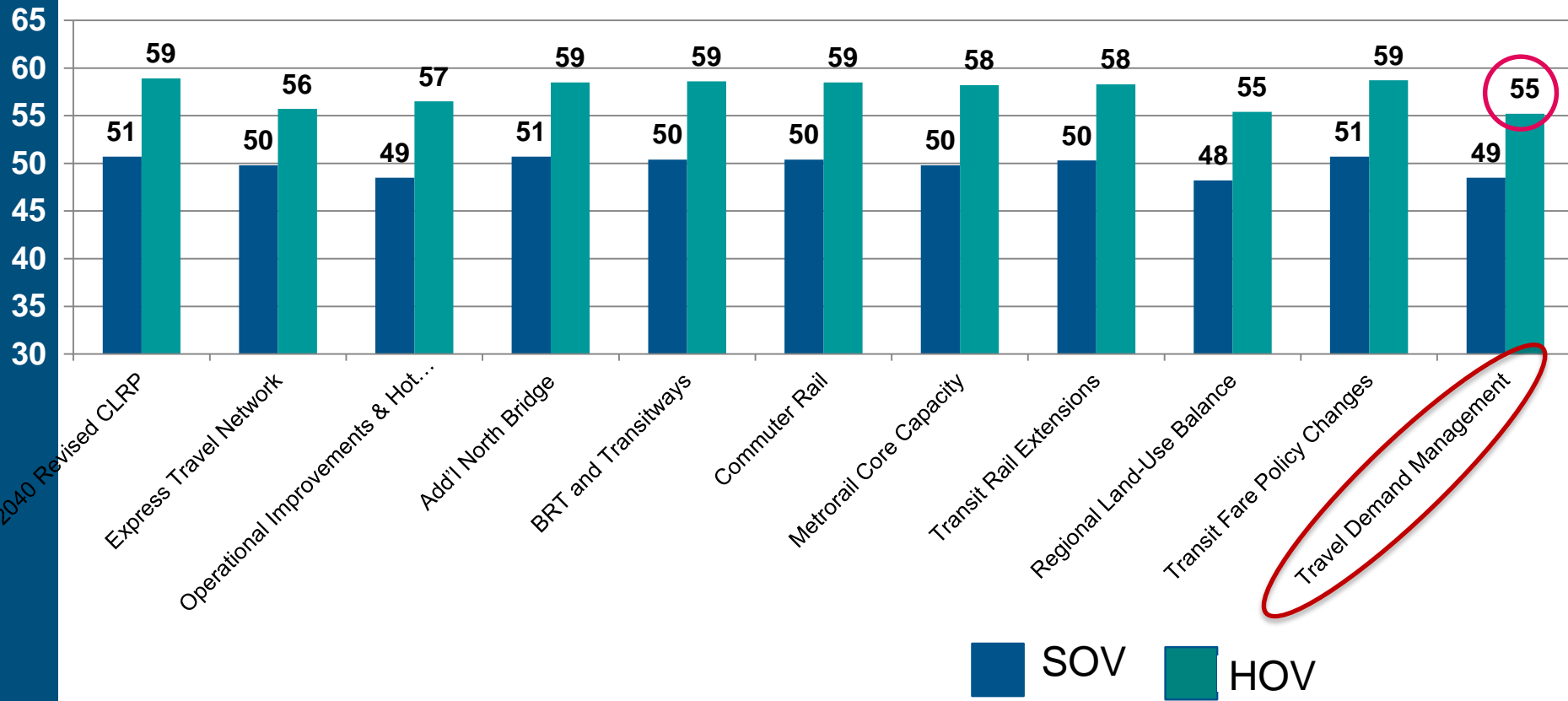
ENHANCED TDM INITIATIVE RELATIVE TO OTHERS

Change In VMT Per Capita (Relative to Current Plans)



ENHANCED TDM INITIATIVE RELATIVE TO OTHERS

Average Commute Travel Times For HOV And SOV About Lowest
(About 7% less Relative To Current CLRP)



TPB ENDORSED INITIATIVES

- **Optimize Regional Land-Use Balance:** This initiative would optimize the balance of jobs and housing region-wide. The idea is to increase jobs and housing around underused rail stations and Activity Centers with high-capacity transit. Plus, it would encourage building additional housing in the region to match employment projections.
- **Regionwide Bus Rapid Transit (BRT) and Transitways:** BRT, transitway, and streetcar routes that are in jurisdictions' plans but not yet in the TPB's long-range plan would be added at various locations throughout the region. This initiative would also improve pedestrian access to transit stations; increase the amount of jobs and housing around the transit stations.
- **Metrorail Core Capacity Improvements:** This initiative includes running eight-car trains exclusively on all Metrorail lines—replacing six-car trains entirely. It would also add a second Rosslyn station, and a new rail line across the Potomac River connecting the District and Virginia through Georgetown to Union Station towards Waterfront. It also would add better bicycle and pedestrian access to rail stations.



TPB ENDORSED INITIATIVES

- **Employer-Based Travel Demand Management Policies:** New policies would increase teleworking regionwide and increase the number of employees receiving transit and carpool subsidies. This initiative would also increase the price for most of the parking for work-trips in Activity Centers.
- **Regional Express Travel Network:** The region would have an extensive network of express toll lanes on existing highways. These lanes would use dynamic tolls to maintain desired travel speeds and be free to carpoolers and transit vehicles. New express bus service connecting Activity Centers would also travel on the network.

The 10 Initiatives to be Studied

INITIATIVE	COMPONENTS
Multimodal Initiatives	
1. Regional Express Travel Network	<ul style="list-style-type: none"> Express toll lanes network (free to HOV and transit) with added lanes where feasible on existing limited access highways (including remaining portion of the Capital Beltway, I-270, Dulles Toll Road, U.S. 50); includes expanded American Legion Bridge. New express bus services on network (paid in part through tolls) connecting major Activity Centers.
2. Regional Congestion Hotspot Relief Program	<ul style="list-style-type: none"> Application of technology and enhanced system operations strategies, such as ramp metering, active traffic management, and integrated corridor management (including transit signal priority and enhanced multimodal travel information), plus targeted capacity enhancements where feasible to address top regional congestion hotspots and adjoining connections. Improved roadway design (such as treatments of turning movements) and reversible lanes on major roadways, as appropriate (to be identified based on strong directional flows). Expanded regional incident management where appropriate. Technological integration of demand-responsive services for persons with disabilities and others with limited mobility to create efficiencies of scale and improve mobility of traditionally underserved populations.
3. Additional Northern Bridge Crossing / Corridor	<ul style="list-style-type: none"> New northern bridge crossing of Potomac River, as a multimodal corridor. New express bus services connecting existing Activity Centers in this multimodal corridor.



The 10 Initiatives to be Studied

INITIATIVE	COMPONENTS
Transit Initiatives	
4. Regionwide High-Capacity Transitways (such as Bus Rapid Transit)	<ul style="list-style-type: none"> • High-capacity transit networks (such as bus rapid transit (BRT)) in Montgomery County, Prince George’s County, Northern Virginia (TransAction 2040), DC (moveDC), and transitway from Branch Ave to Waldorf, specifications according to jurisdiction plans. • Improved bicycle and pedestrian connections and access improvements to transit stations.
5. Regional Commuter Rail Enhancements	<ul style="list-style-type: none"> • VRE System Plan 2040 and MARC Growth and Investment Plan (including run-thru and two-way service on selected lines, increased frequency and hours of service). • Long Bridge corridor improvements including at least 4 tracks and bicycle-pedestrian facilities. • Improved bicycle and pedestrian connections and access improvements to rail stations.
6. Metrorail Regional Core Capacity Improvements	<ul style="list-style-type: none"> • 100% 8-car trains • Metrorail station improvements at high-volume stations in system core. • Second Rosslyn station to reduce interlining and increase frequency. • New Metrorail core line to add capacity across Potomac River (new Rosslyn tunnel) between Virginia and DC through Georgetown to Union Station toward Waterfront. • Improved bicycle and pedestrian connections and access improvements to rail stations.



The 10 Initiatives to be Studied

INITIATIVE	COMPONENTS
Transit Initiatives	
7. Transit Rail Extensions	<ul style="list-style-type: none"> • Metrorail extensions to Centreville/Gainesville, Hybla Valley/Potomac Mills. • Can consider an extension(s) in MD, such as to National Harbor or north of Shady Grove (to be defined later). • Purple line extension to Tysons (west) and Eisenhower Avenue (east). • Improved bicycle and pedestrian connections and access improvements to rail stations.
Policy-Focused Initiatives	
8. Optimize Regional Land-Use Balance	<ul style="list-style-type: none"> • Optimize jobs/housing balance regionwide. • Increase jobs and housing around underutilized rail stations and Activity Centers with high-capacity transit. • Build more housing in the region to match employment (about 130,000 more households).
9. Transit Fare Policy Changes	<ul style="list-style-type: none"> • Reduced price Metrorail fare for off-peak direction during peak period and on underutilized segments. • Free transit for low-income residents.
10. Amplified Travel Demand Management for Commute Trips	<p>New policies (e.g., employer trip reduction requirements) and programs (e.g., financial incentives) implemented at the local and regional scale to significantly reduce single-occupancy vehicle commute trip making, including:</p> <ul style="list-style-type: none"> • Employer-based parking cash-out • Expanded employer-based transit/vanpool benefits • Expanded telework and flexible schedule adoption • Substantial increase in priced commuter parking in major Activity Centers.

