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Bus Rapid Transit for the Metropolitan Washington Region:
A Key Component of the TPB Scenario Study

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National Capital Region Transportation Planning Board (TPB)

Presentation to the Virginia General Assembly SJ 122 Committee

October 22, 2008

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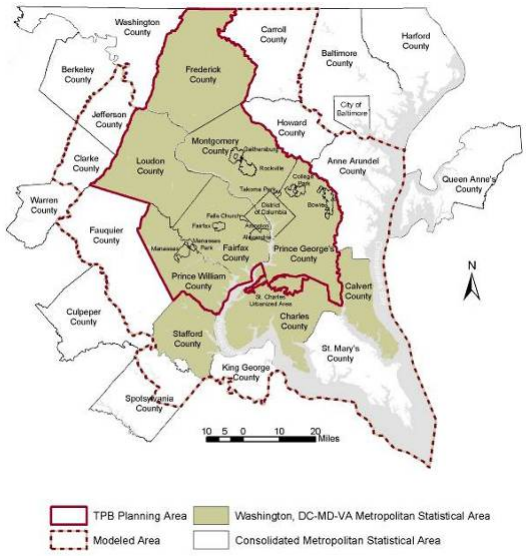
Transportation Planning in the Washington Region



- Approximately 3,000 square miles
- Includes 5 million people and 3 million jobs
- The National Capital Region **Transportation Planning Board (TPB)** prepares a financially constrained, 30-year transportation plan (CLRP) for the TPB planning area

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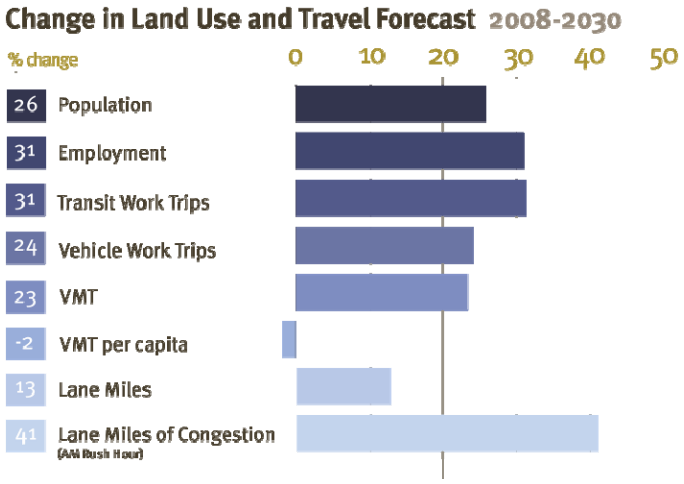
Growth in the Region



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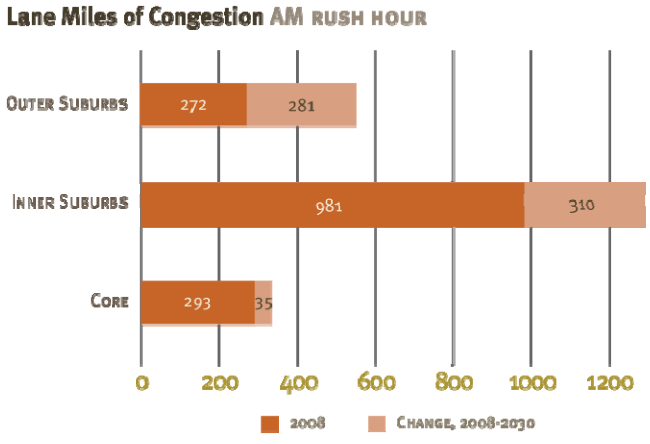
Greatest Congestion in Inner Suburbs

The most Dramatic Change is in Outer Suburbs



Urban core defined as The District, Arlington and Alexandria. Inner suburbs defined as Fairfax county in Virginia and Montgomery and Prince George's counties. Outer Suburbs defined as Loudoun, Prince William, and Stafford counties in Virginia; Frederick, Calvert and Charles counties in Maryland.

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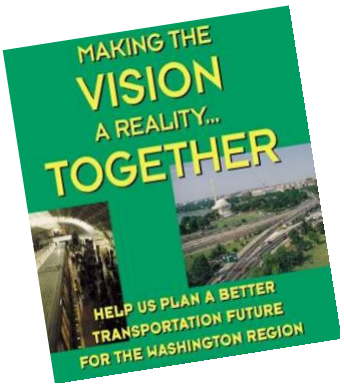
Working to Address These Challenges

Among other strategies, the TPB has sought to investigate scenarios that might better meet the objectives of its 1998 Vision:

- Promoting activity centers
- Increasing transit use
- Reducing driving



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TPB Regional Mobility and Accessibility Study, 2001-2006

5 Scenarios to address the issues:

1. More Households Scenario
2. Households In Scenario
3. Jobs Out Scenario
4. Region Undivided Scenario
5. Transit-Oriented Development Scenario

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TPB Value Pricing Study

October 2006-February 2008

3 Scenarios of Variably Priced Lanes (VPLs) looking at:

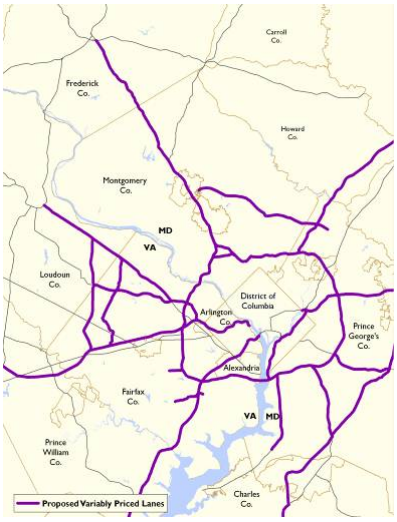
All Freeways

Arterials outside Beltway

Convert existing HOV lanes

Direct access ramps at key interchanges

Add high quality bus transit to VPLs



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Two New Scenarios: 2008 - 2009

What Would it Take?

Starts with CO2 goals (80% below 2005 levels in 2050 and 20% reduction by 2020) and assess what scales and combinations of interventions will be necessary to achieve the goal.

CLRP Aspirations

Draws on past scenarios (5 transportation/land use scenarios and 2 value pricing scenarios) to provide an ambitious yet attainable vision of land use and transportation for the 2010 CLRP update.

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Reducing Mobile GHG Emissions

3 categories of strategies to reduce mobile CO2 emissions

Fuel Efficiency	Fuel Carbon Intensity	Travel Efficiency
Beyond CAFE standards [currently 35 mpg by 2020]	Alternative fuels (biofuels, hydrogen, electricity) Vehicle technology (hybrid engine technology)	Reduce VMT through changes in land use, travel behavior, prices Reduce congestion Improve operational efficiency

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CLRP Aspirations Scenario

What Would it Take?	CLRP Aspirations
Starts with CO2 goals (80% below 2005 levels in 2050 and 20% reduction by 2020) and assess what scales and combinations of interventions will be necessary to achieve the goal.	Draws on past scenarios (5 transportation/land use scenarios and 2 value pricing scenarios) to provide an ambitious yet attainable vision of land use and transportation for the 2010 CLRP update.

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CLRP Aspirations Scenario

Goal: To move jobs and housing closer together to create dense, accessible areas, and more efficient transportation systems

Land Use Component	→	Supportive Transit	→	Pricing Options
• First cut using previous scenarios to determine what receiving zones can absorb • Seek review and refinement by planning directors		• Use menu of transit options from past scenarios • Connect activity centers •Work with TPB Bus Subcommittee		• Address congestion through pricing of new and/or existing lanes • Provide alternatives through enhanced transit

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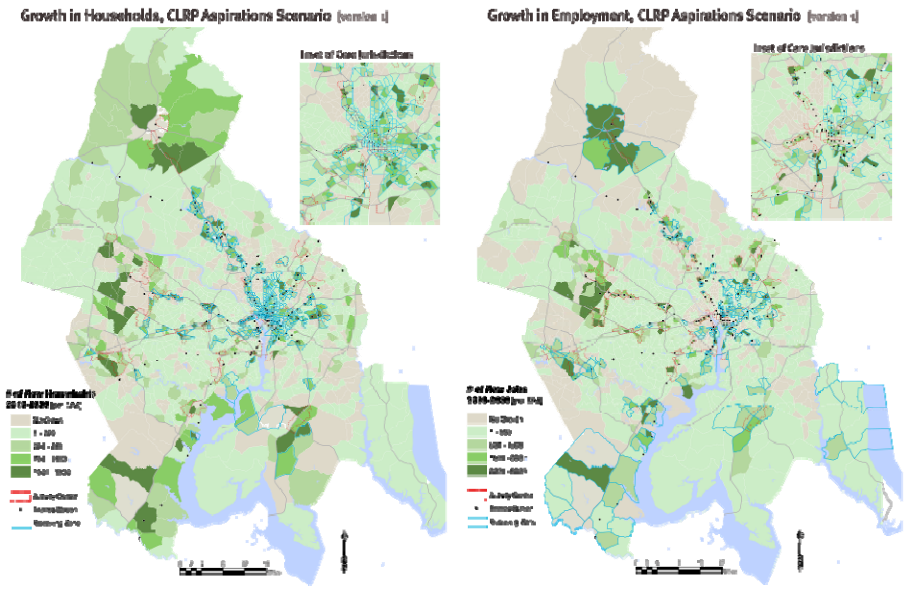
Land Use: New Scenario Growth Shifts



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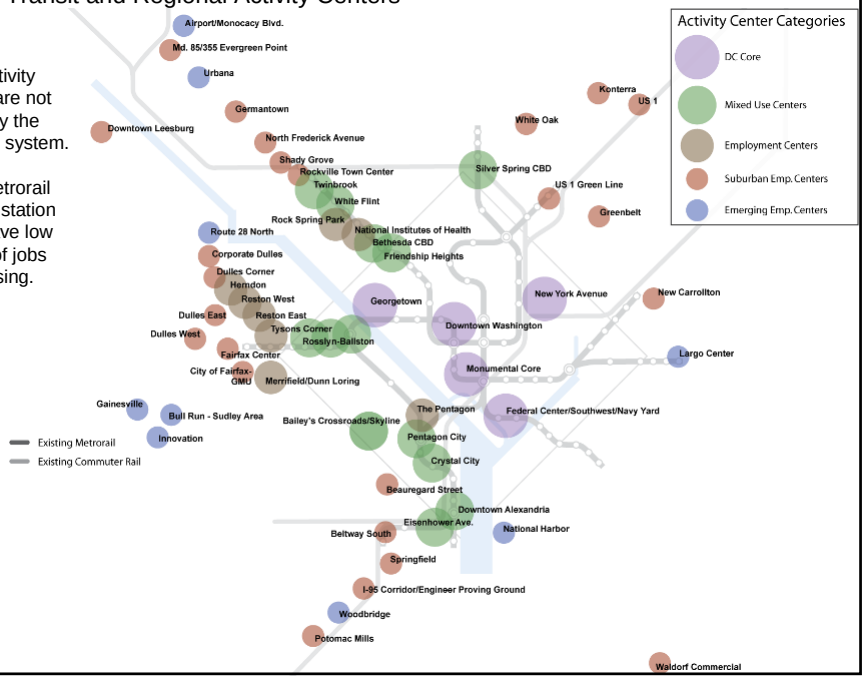
Rail Transit and Regional Activity Centers

Many activity centers are not served by the Metrorail system.

Many Metrorail stations' station areas have low density of jobs and housing.



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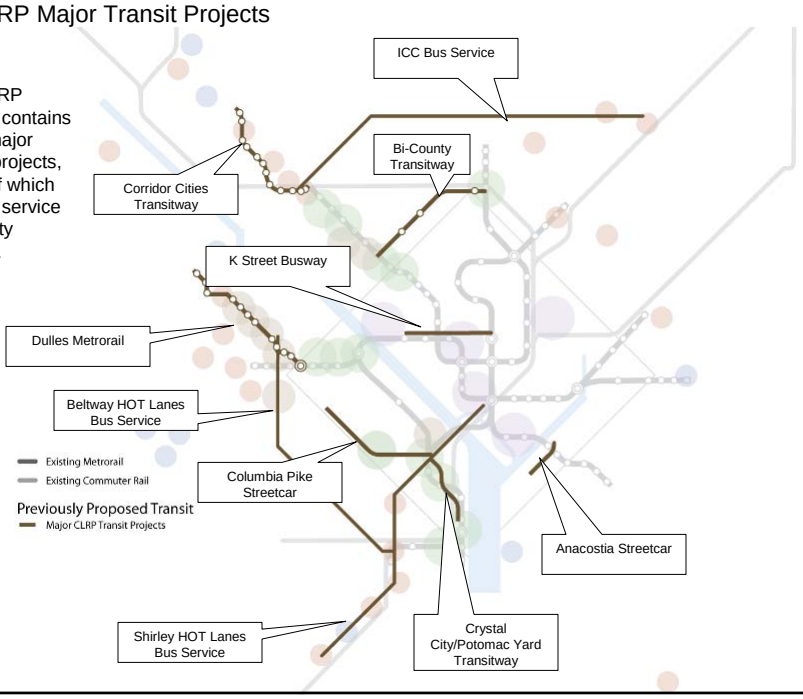
CLRP Major Transit Projects

The CLRP already contains many major transit projects, many of which provide service to activity centers.



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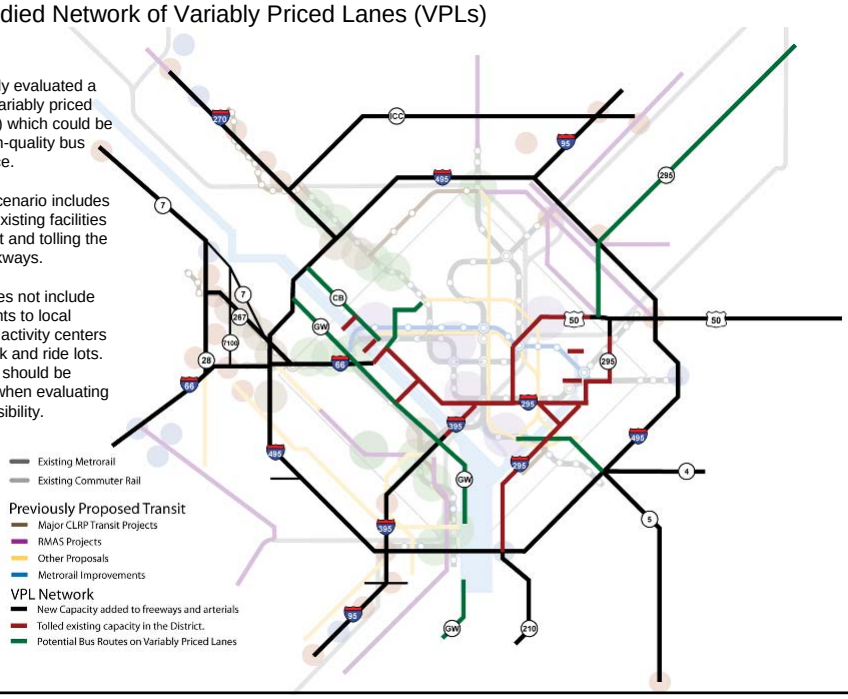
Studied Network of Variably Priced Lanes (VPLs)

TPB Recently evaluated a network of variably priced lanes (VPLs) which could be used for high-quality bus transit service.

Advanced scenario includes tolling only existing facilities in the District and tolling the region's parkways.

Scenario does not include enhancements to local roadways in activity centers and new park and ride lots. These costs should be considered when evaluating financial feasibility.



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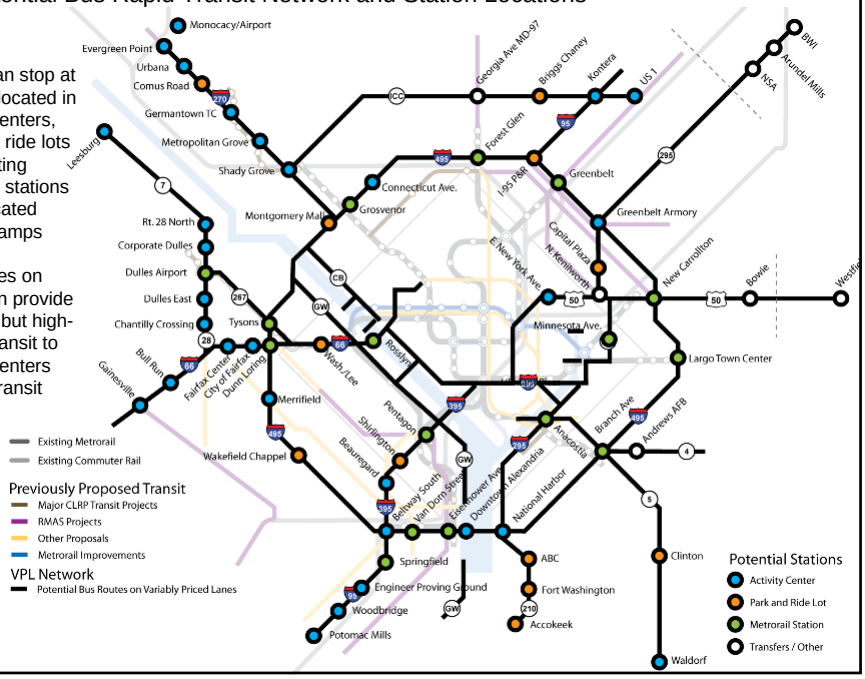
Potential Bus Rapid Transit Network and Station Locations

Buses can stop at stations located in activity centers, park and ride lots and existing Metrorail stations via dedicated access ramps

Bus routes on VPLs can provide low-cost but high-quality transit to activity centers without transit service.



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Bus Service on Variably Priced Lanes

- Previous pricing study evaluated regular and express bus service operating on the variably priced lanes
- CLRP Aspirations Scenario to include BRT-like bus stations and technologies at high-demand locations

The Shirlington Transit Station, Arlington, VA.

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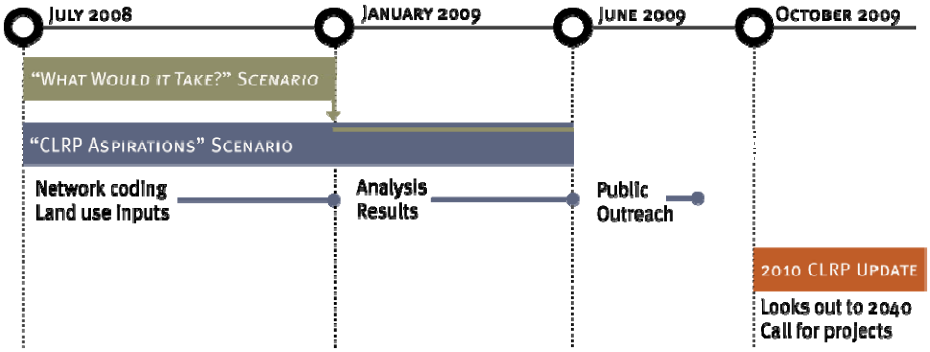
Study Timeline and Next Steps