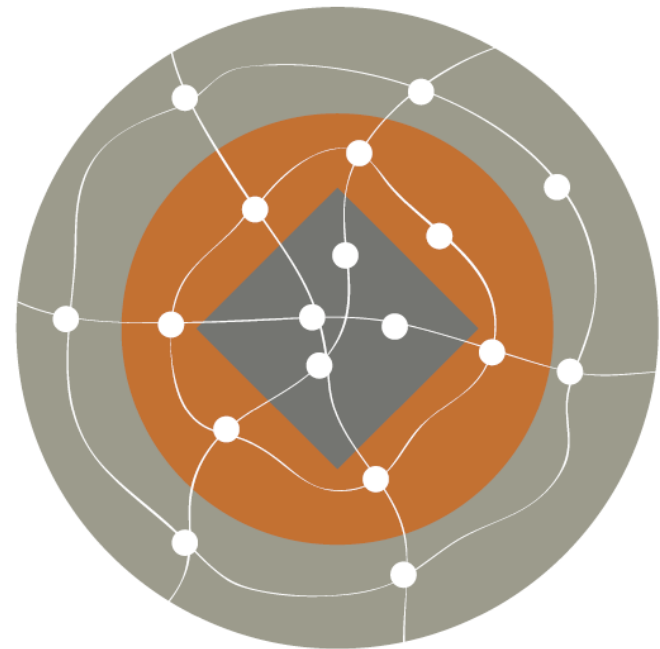


# TPB CLRP Aspirations Scenario

## Streamlined Variably Priced Lane Network Sensitivity Test

Erin Morrow  
Department of Transportation Planning

Presentation to the TPB Technical Committee  
September 9, 2011



# Outline

CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



1. Review CLRP Aspirations Scenario
2. Two Sensitivity Tests
  - Land Use Sensitivity Test
  - New: “Streamlined” Variably Priced Lane (VPL) Network
3. Results
4. Next Steps

# CLRP Aspirations Scenario



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

## Land Use Shifts

- Concentrating projected growth in activity centers and existing/planned transit stations
- Consistent review and refinement by planning directors

## Regional VPL Network

- Address congestion through pricing of new and/or existing lanes
- Provide alternatives through enhanced transit

## Supportive Transit

- Use menu of transit options from past scenarios
- Connect activity centers

# Land Use Shifts – Targeted Growth Areas











## CLRP Aspirations Scenario

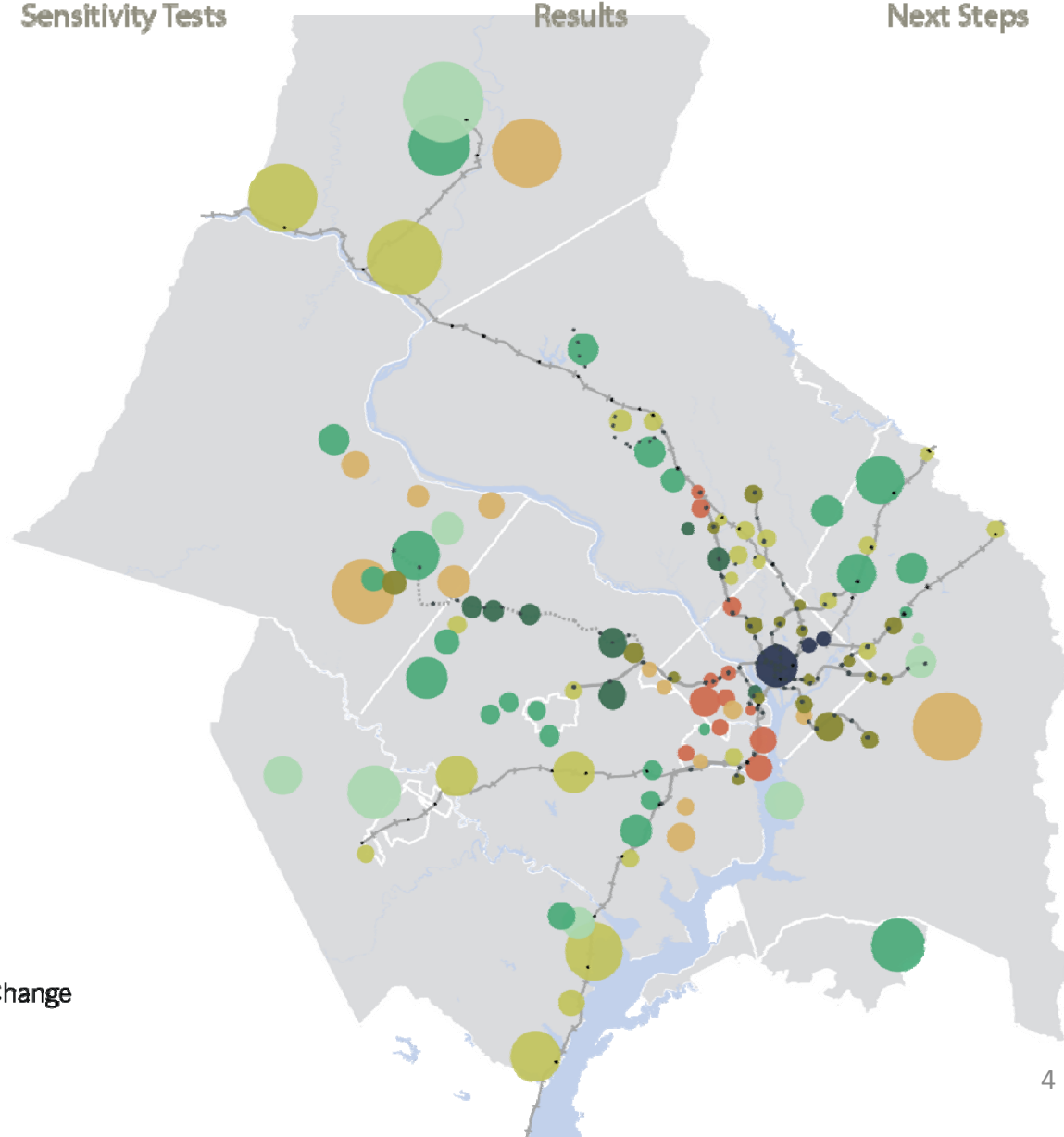
## Sensitivity Tests

## Results

## Next Steps

Types of Growth Areas, Density Goals, and Jobs/Housing Balance Goals

-  **DC Core**  
32 jobs and 20 du/acre  
3 jobs/household
-  **Mixed Use Center**  
20-32 jobs and 10-20 du/acre  
2 jobs/household
-  **Employment Center**  
14 jobs and 7 du/acre  
2 jobs/household
-  **Suburban Employment Center**  
10 jobs and 5 du/acre  
2 jobs/household
-  **Emerging Employment Center**  
5 jobs and 3 du/acre  
1.6 jobs/household
-  **MetroRail or Transitway Station Area**  
10 jobs and 5 du/acre  
2 jobs/household
-  **Commuter Rail Station Area**  
3 jobs and 2 du/acre  
1.5 jobs/household
-  **Locally Requested Center or Area of No Change**  
Goals vary according to specific local staff input.



# Land Use Shifts – Summary



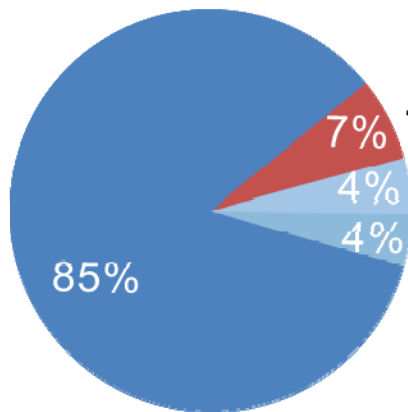
CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

## How much did we shift?



**7%**  
of the 2030 jobs  
and households  
was shifted

**15%** of 2030 jobs & households is 2015-2030 growth  
**4%** of forecast growth already in “Targeted Growth Areas”  
**4%** of “movable” growth not shifted

## Also added growth from outside the region

**3.5%**  
increase in  
households

and

**1%**  
increase in  
jobs

# Network of Variably Priced Lanes

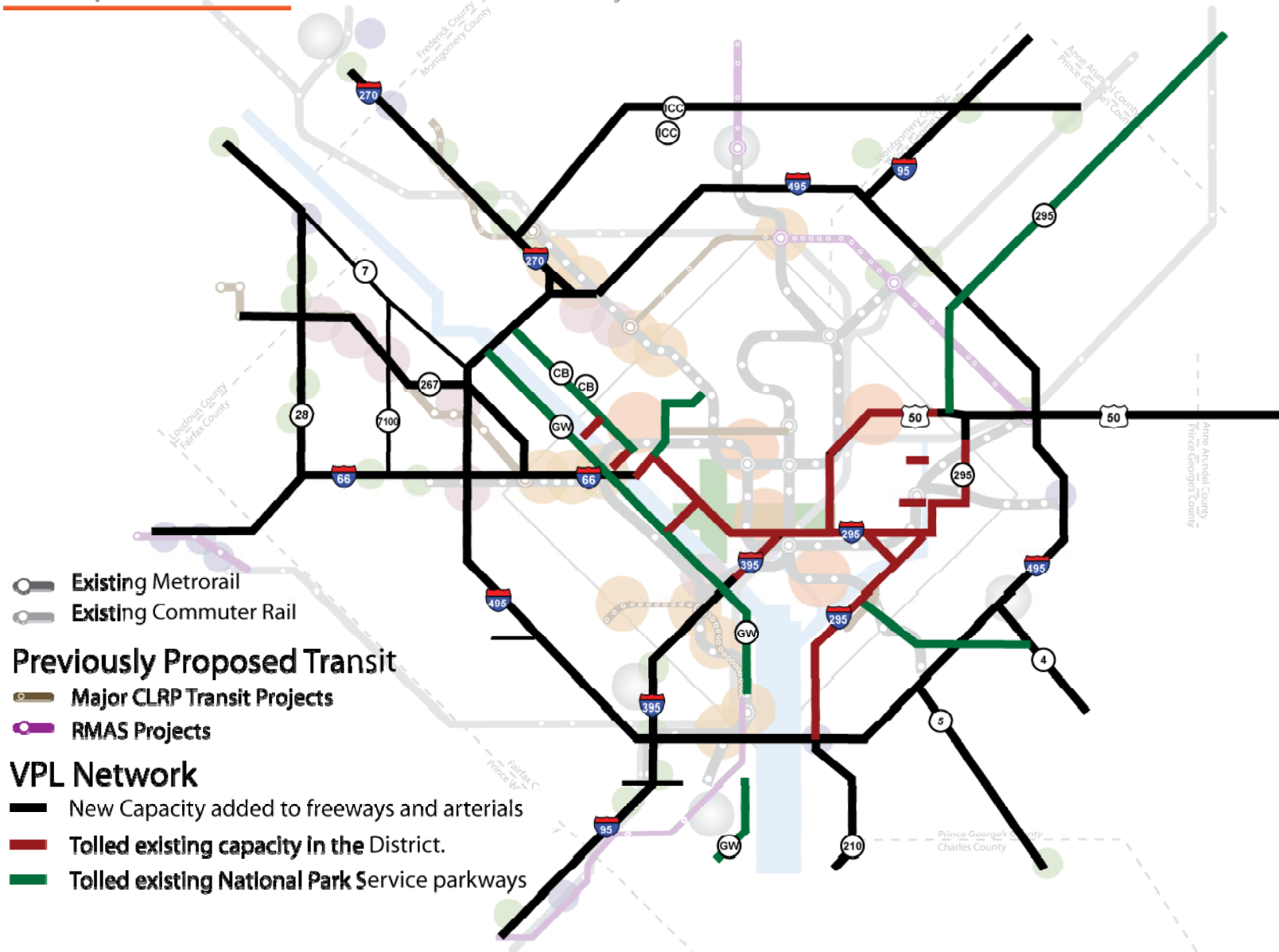


## CLRP Aspirations Scenario

## Sensitivity Tests

## Results

## Next Steps



# Regional Bus Rapid Transit Network

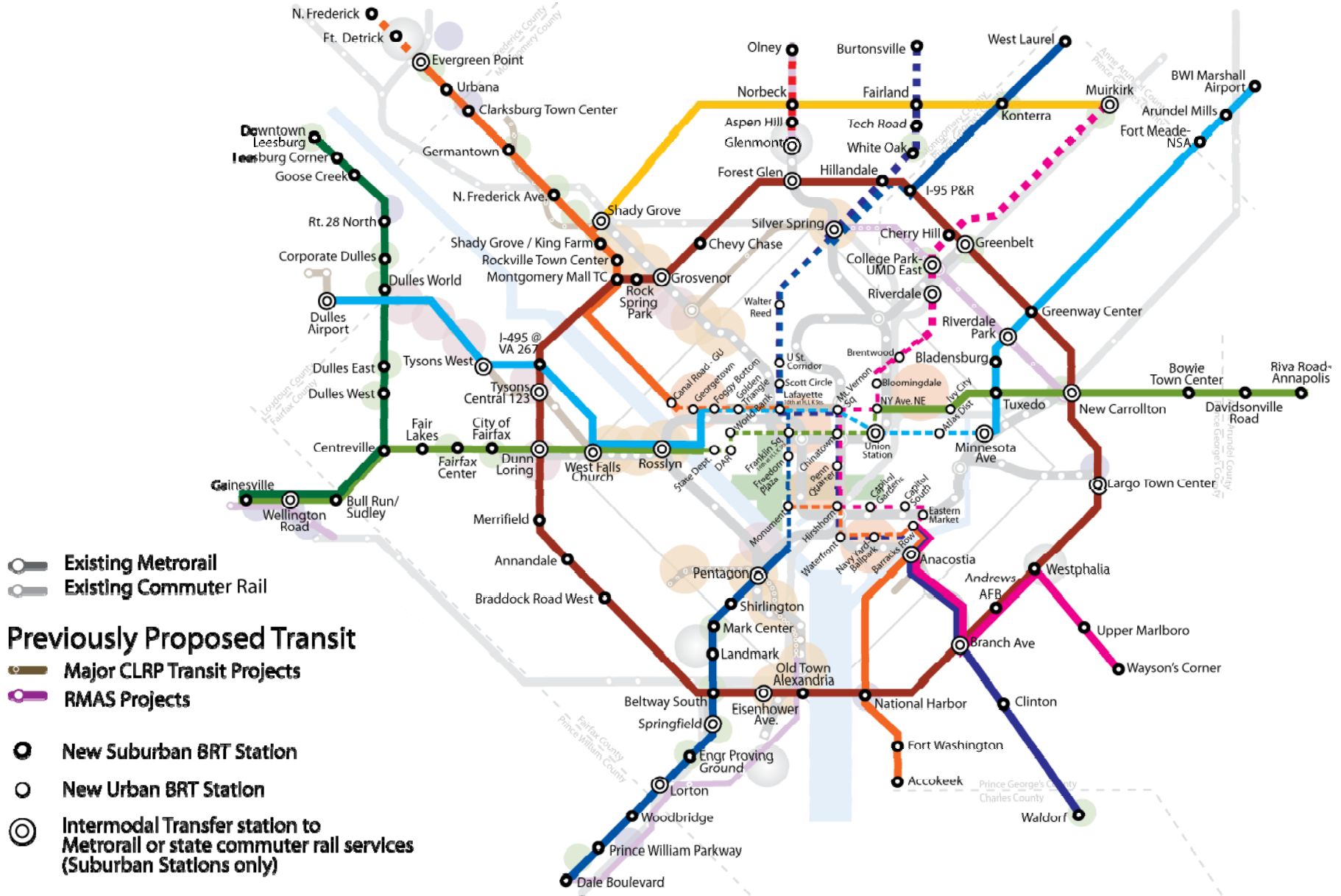


## CLRP Aspirations Scenario

## Sensitivity Tests

## Results

## Next Steps



# Full CLRP Aspirations Scenario



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Presented to the TPB in September 2010
- Significantly reduced regional congestion, and increased transit, non-motorized, and HOV trips over baseline (2008 CLRP + Round 7.2 Land Use)
- Increased regional VMT and average trip lengths
- Revenues cover about 80% of the costs
- Concerns about high cost for construction of extensive VPL network



# Land Use Only Sensitivity Test



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Presented to the TPB in September 2010
- Tested CLRP Aspirations land use shifts with adopted CLRP highway and transit projects
- Decreases in VMT, VMT per capita, and average trip length relative to baseline
- Small increases in regional vehicle hours of delay and vehicle hours of travel

# New: Streamlined VPL Network Sensitivity Test



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Used CLRP Aspirations land use and transit
- Referred to studies such as the I-270 Multi-modal Corridor Study, the West Side Mobility Study, and the Capital Beltway Study
- Used volume-to-capacity ratio from full scenario model results
- Reduced new lane construction by 30%
- Reduced interchange construction by 33%

# Regional Travel Indicators

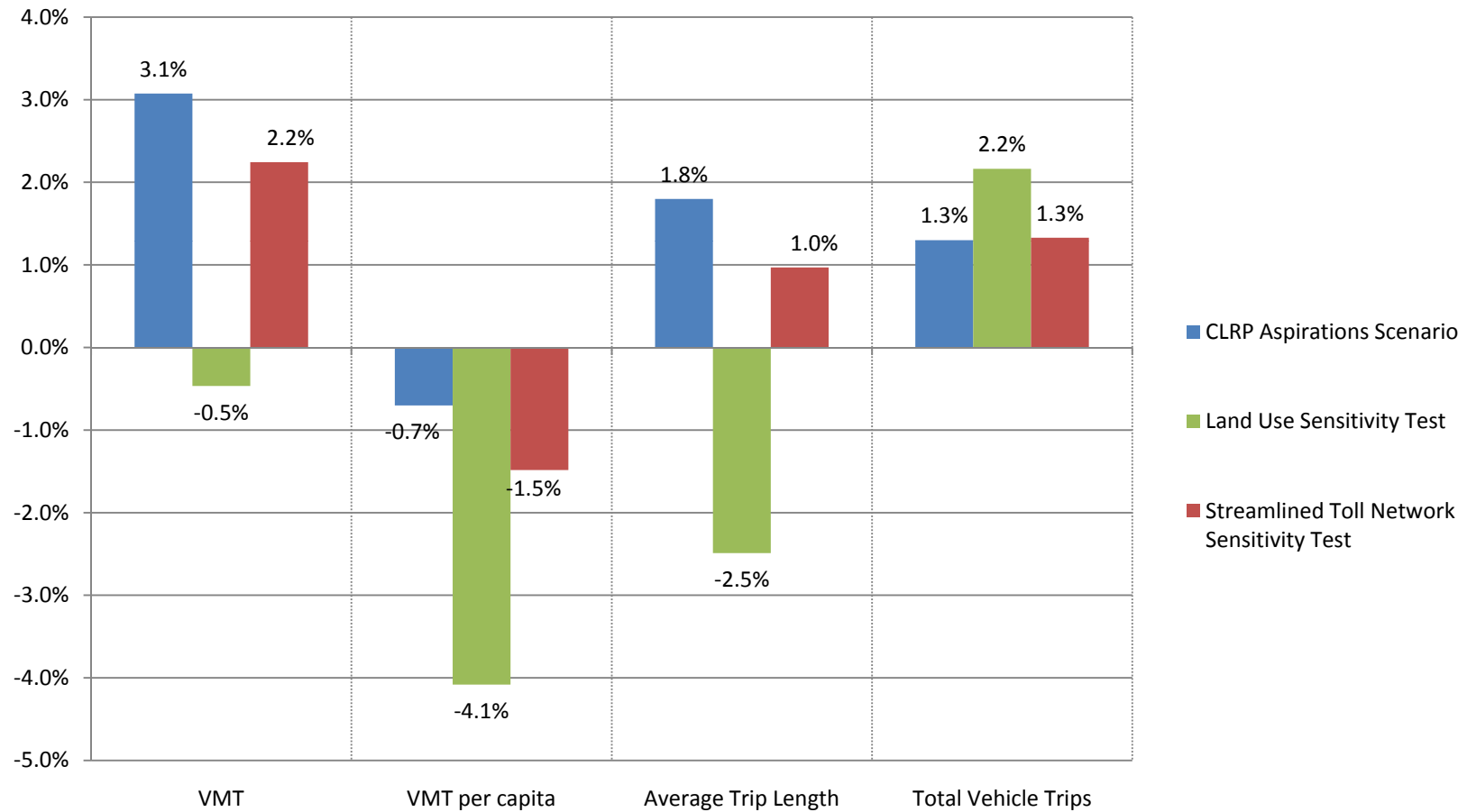


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



# Regional Mode Share

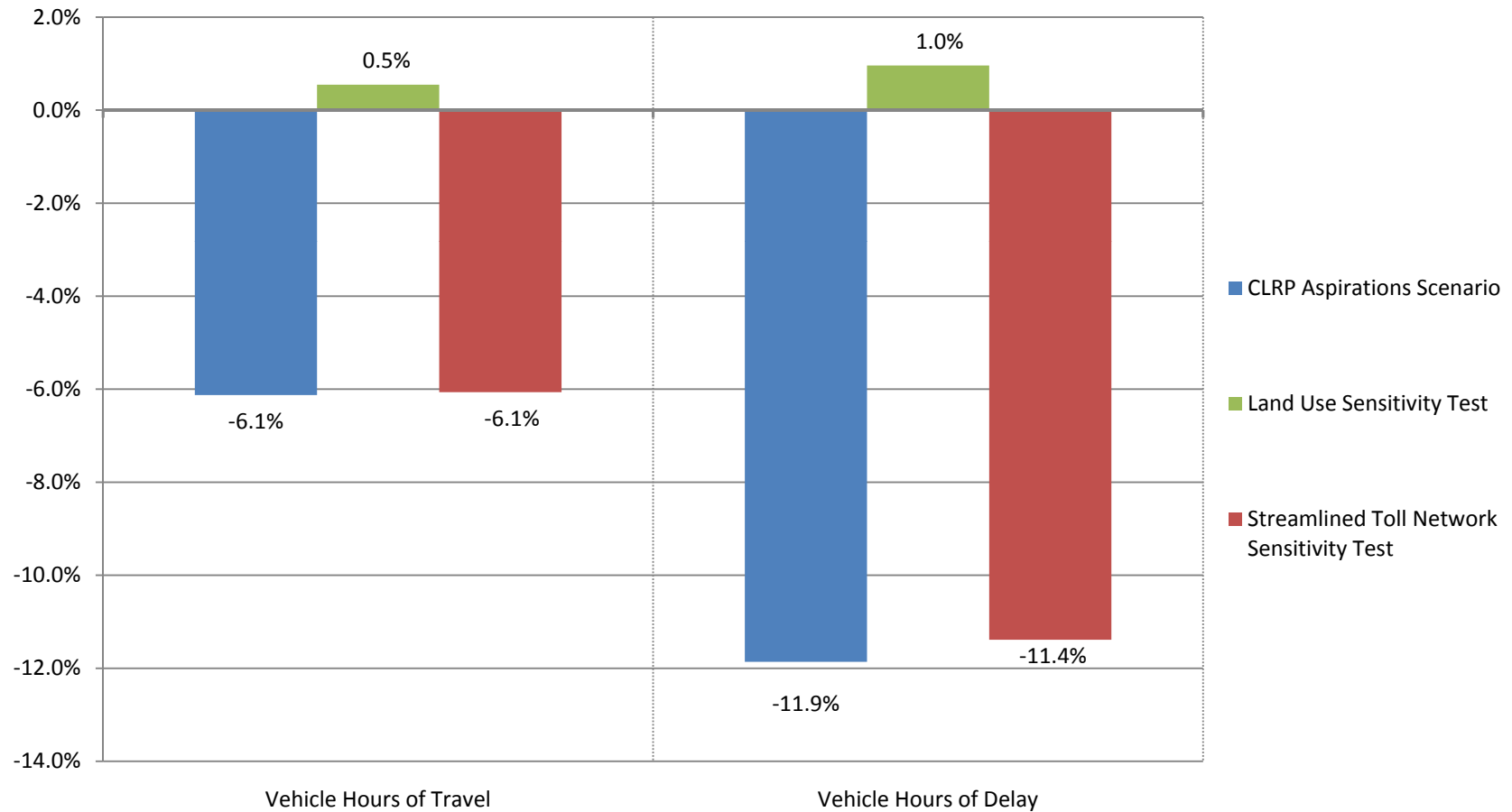


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



# Regional Congestion Indicators

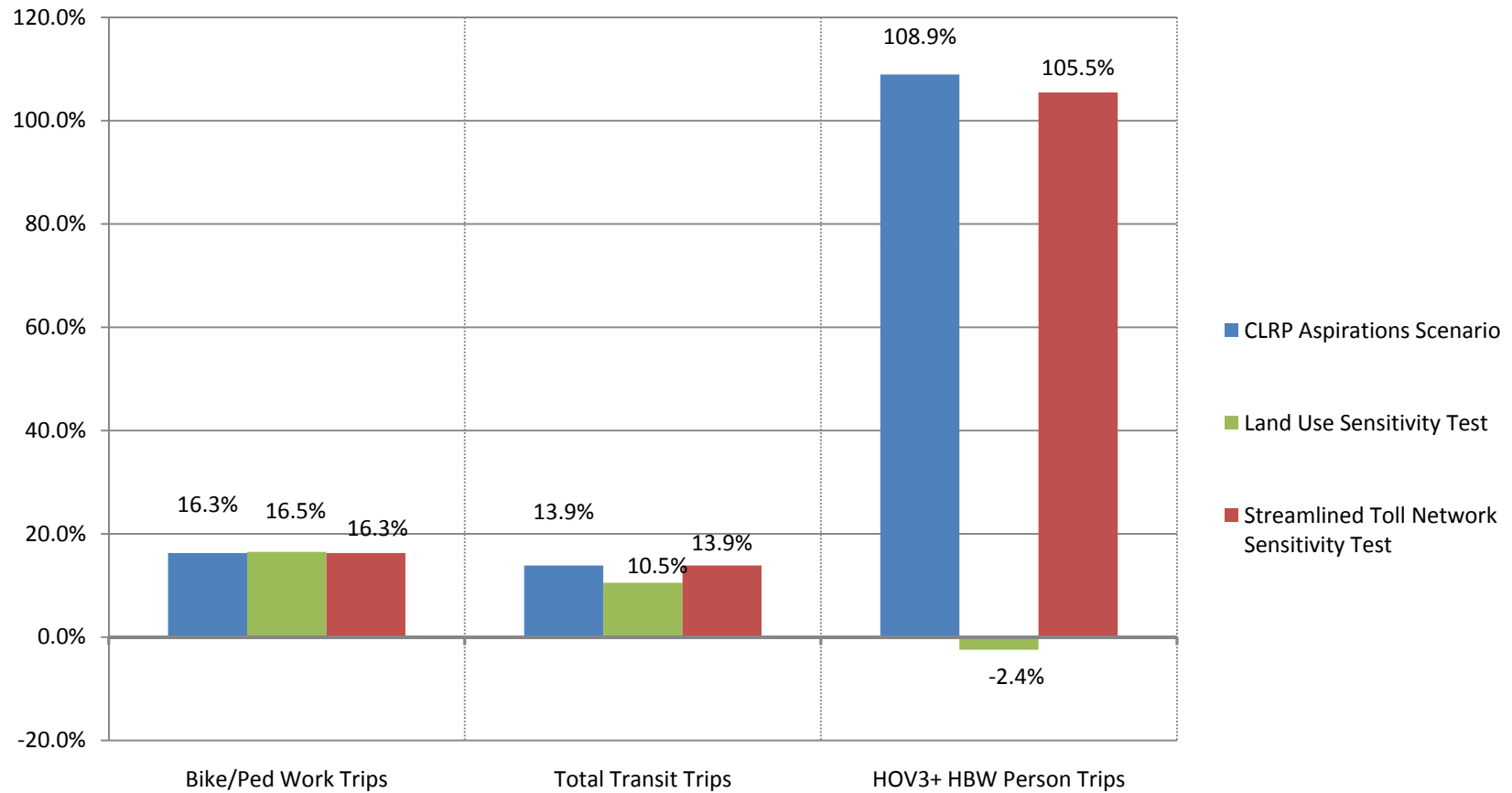


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



# Air Quality

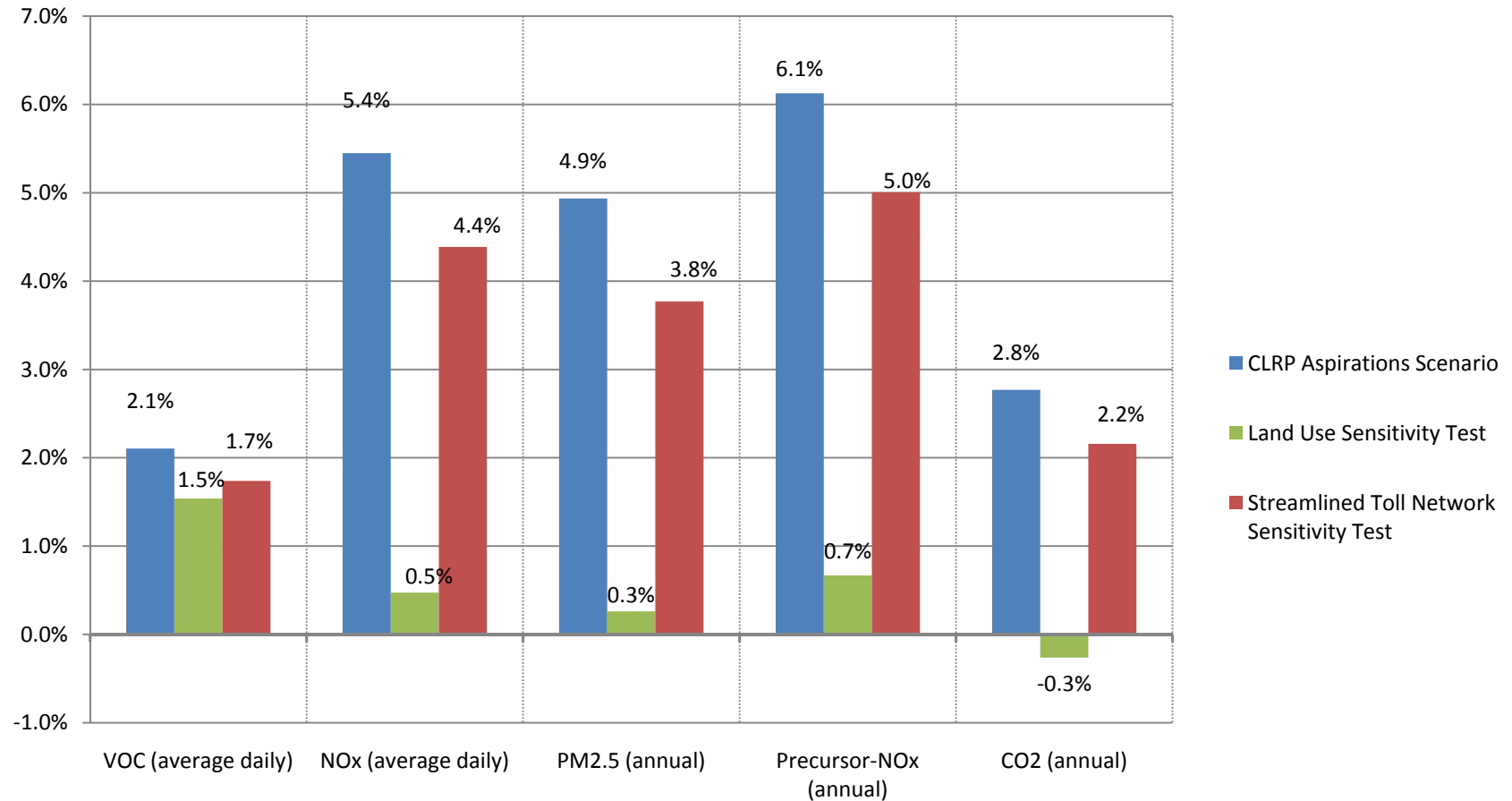


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



# Financial Analysis



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

## Year 2030 Revenue to Cost Analysis of Full and Streamlined Scenarios (2010\$)

Scenario	Annualized Cost (millions)	Annual Revenue (millions)	Revenue/Cost
Full Scenario	\$ 3,799	\$ 3,082	0.81
Streamlined Scenario	\$ 2,688	\$ 2,997	1.11

# Streamlined VPL Network Sensitivity Test



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Significant reductions in regional vehicle hours of delay and vehicle hours of travel similar to the full CLRP Aspirations Scenario
- Financially feasible in that toll revenues cover highway and transit costs, both capital and operating



# Next Steps



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Requesting feedback on the technical memorandum from the TPB Technical Committee
- Address comments and present to TPB Technical Committee in October
- Present results of Streamlined VPL Sensitivity Test to the TPB in October or November