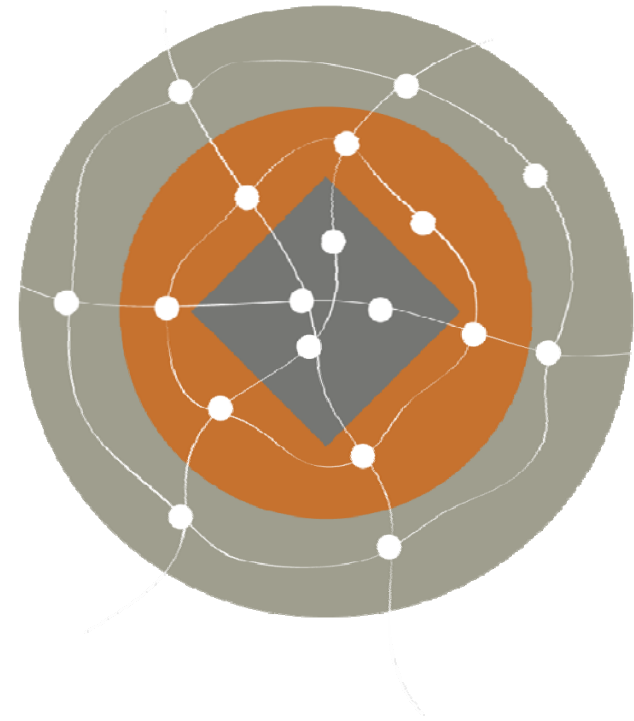


# **TPB Scenario Study**

## **Draft Results**



**Monica Bansal**

**Department of Transportation Planning**

Presentation to the Planning Directors Technical Advisory  
Committee

March 19, 2010

# Why do we need an “Aspiration”?

beginnings

land use

roads and pricing

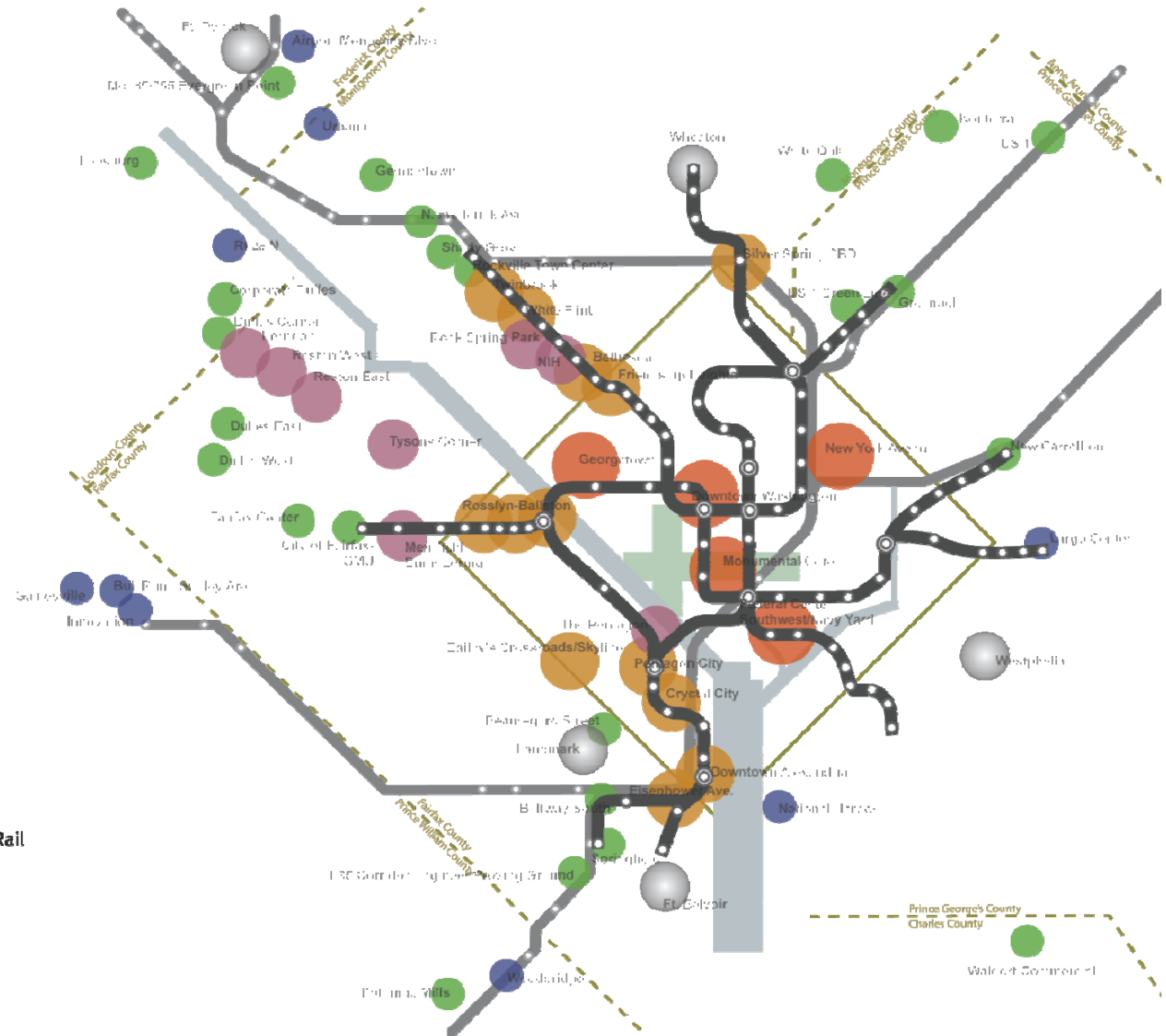
transit

results

next steps



1. Activity centers still capture significant growth, but not enough (30% of 2015-2030 jobs and 24% of households)
2. Many activity centers do not have high quality transit (rail is not enough)
3. Many transit stations are still underutilized

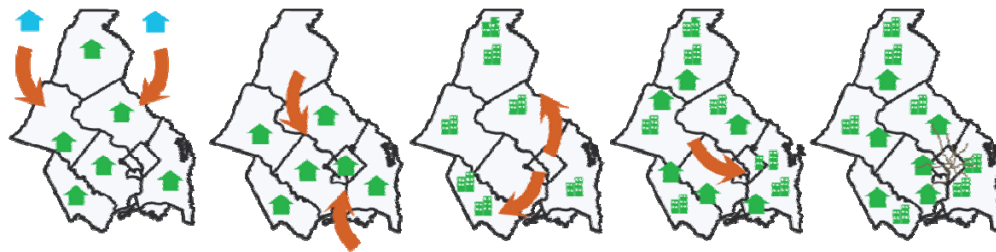


# Why Another Scenario Study?

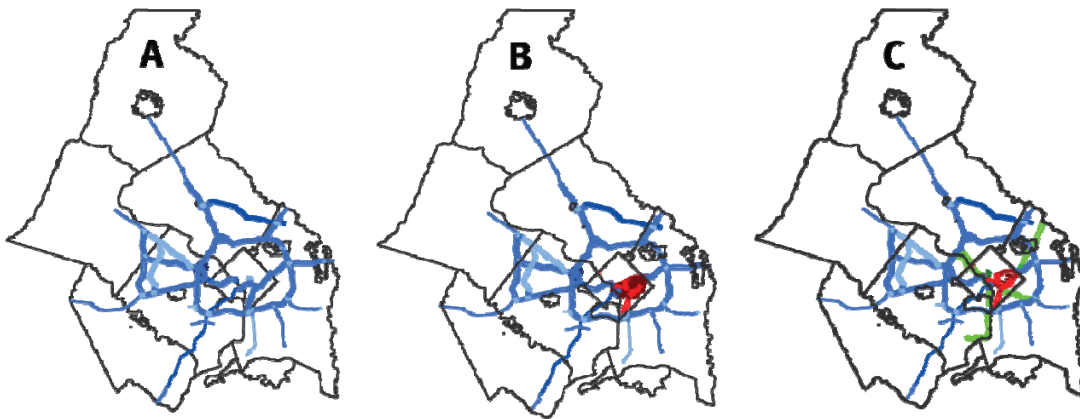


## What Ifs

### 1. RMAS: Moving Jobs and Housing Closer Together



### 2. TPB Value Pricing Study: Pricing can provide capacity and revenue for transit



## Goals

### 3. The TPB Vision

“Economically strong regional activity centers with a mix of jobs, housing, services, and recreation in a walkable environment”

“A web of multi-modal transportation connections which provide convenient access”

“A user-friendly, seamless system”

“Reduction of per capita VMT ”

**Creating a regional land use and transportation “aspirational” vision**

# 3 Layers to Achieving Goals

beginnings

land use

roads and pricing

transit

results

next steps



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## 1. Land Use Decisions

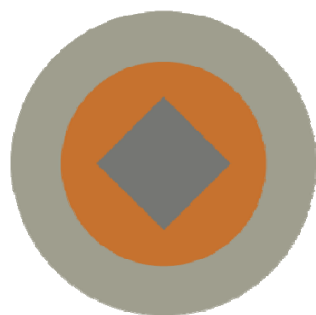
Concentrating growth in activity centers and around transit  
Consistent review and refinement by planning directors

## 2. Pricing Options

Address congestion through pricing of new and existing lanes  
Provide capacity and revenue for enhanced transit

## 3. Supportive Transit

Use menu of transit options from past scenarios  
Connect activity centers  
Review by Regional Bus Subcommittee



# Layer 1

## Land Use

# What can we do with land use?



beginnings

land use

roads and pricing

transit

results

next steps

## Transit Supportive Density

**High enough densities in activity centers to support different levels of mass transit**

## Walkable Density

### **Regional Models**

Rosslyn-Ballston Corridor  
Old Town Alexandria

## Mixed Use

**Jobs/Housing balance** for the region, jurisdictions and activity centers

## Move Only New Growth

Shifts from **2015-2030**

## Existing Character and Planned Development

**Varying land use goals**

# Targeted Growth Areas and Goals

beginnings

land use

roads and pricing

transit

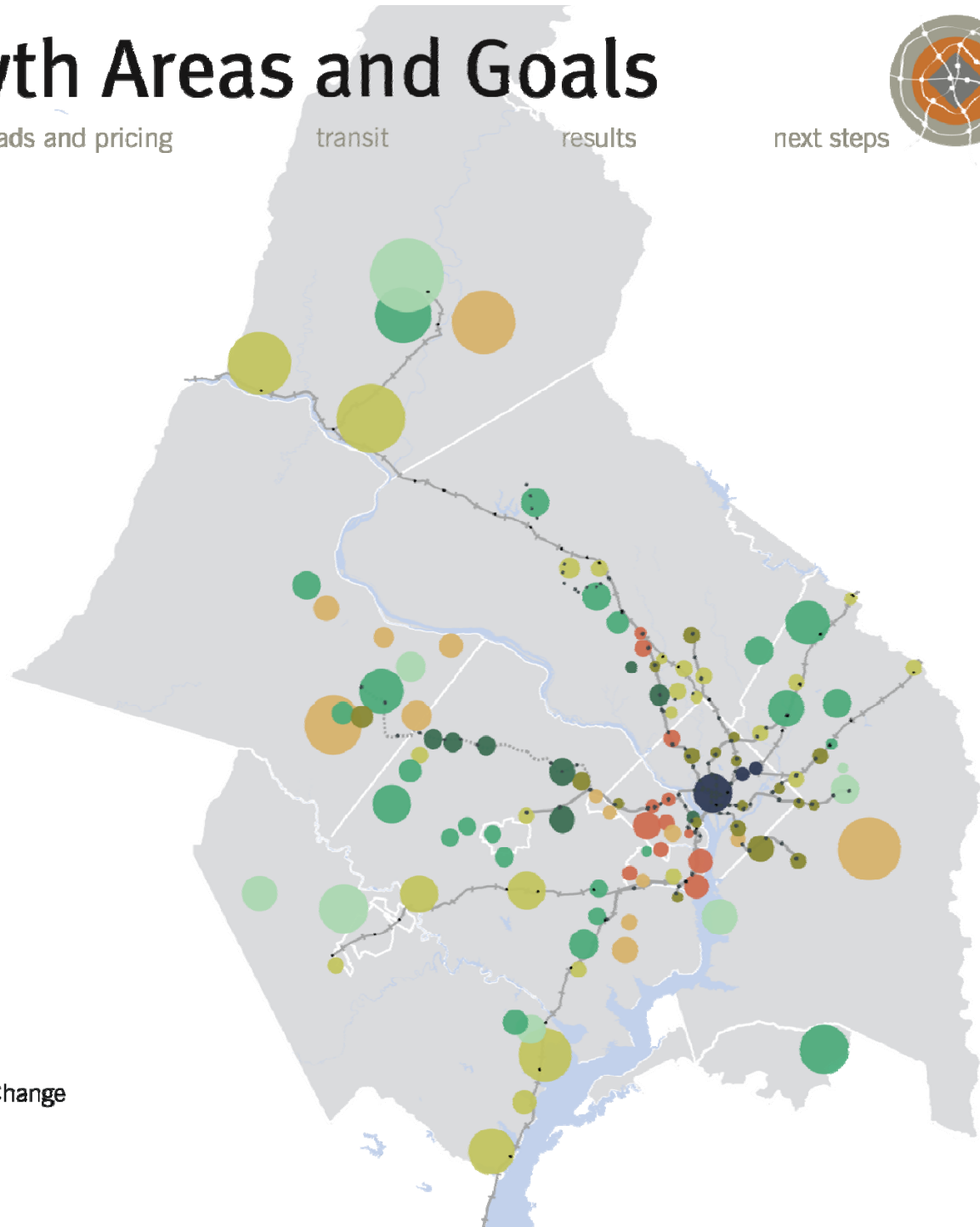
results

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.



# Summary of Land Use Shifts



beginnings

land use

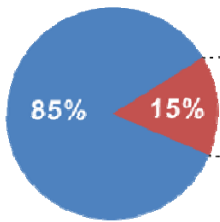
roads and pricing

transit

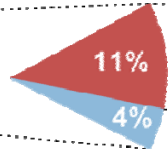
results

next steps

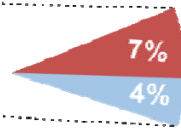
## How much did we shift?



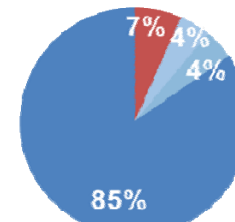
**15%**  
of 2030 jobs &  
households is  
2015-2030 growth



**28%**  
of forecast growth  
in "Targeted  
Growth Areas"



**60%**  
of "movable"  
growth was  
shifted



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

**+**

an additional

**3.5%**  
increase in  
households

and

**1%**  
increase in  
jobs



# Summary of Land Use Shifts



beginnings

land use

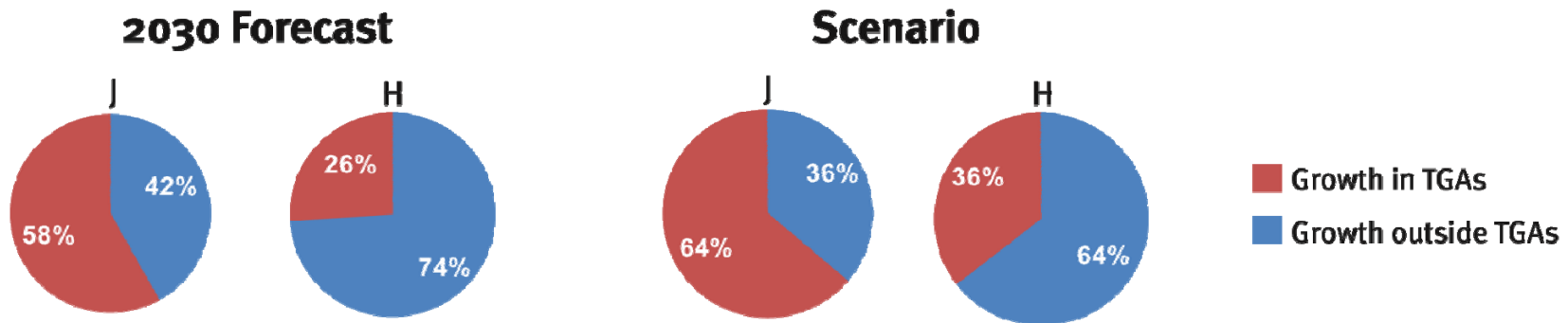
roads and pricing

transit

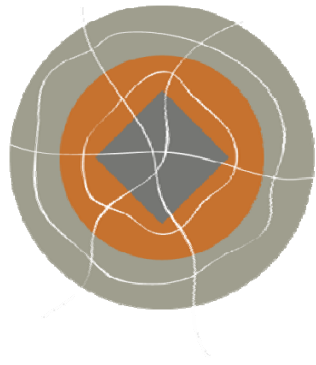
results

next steps

## What did we achieve in the Targeted Growth Areas?

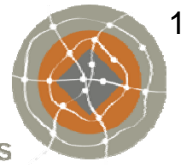


Jobs (J) and households (H) in targeted growth areas increased by **11%** and **42%**, respectively—creating more jobs/housing balance throughout the region.



# Layer 2 Pricing

# Network of Variably Priced Lanes



beginnings

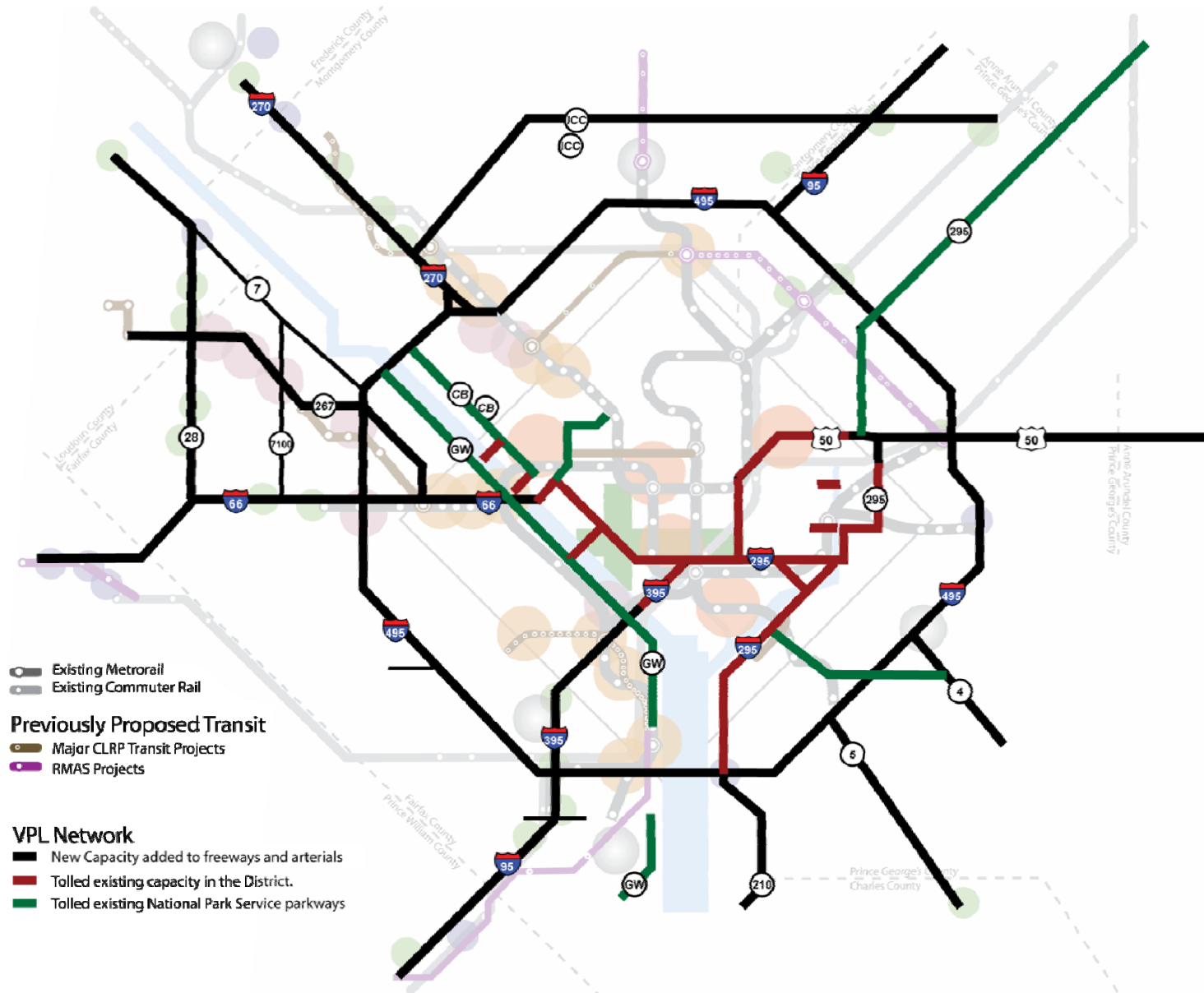
land use

roads and pricing

transit

results

next steps



# Summary of Pricing

beginnings

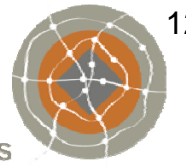
land use

roads and pricing

transit

results

next steps



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Network based on 2008 TPB Value Pricing Study

The scenario creates a **1,650**-mile regional priced lane network:

**150** priced lane miles in the CLRP

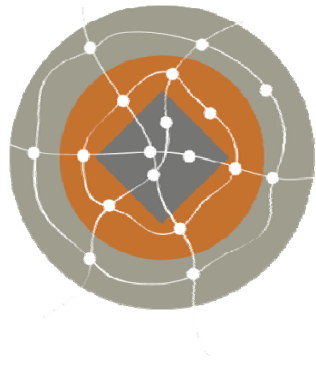
**350** lane miles converted from HOV lanes

**650** new lane miles

**500** lane miles converted from GPLs (DC, Parkways)

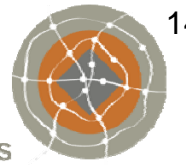
**35 to 45 MPH**: Priced lanes target speed

**Creates relatively free-flowing right of way for bus transit**

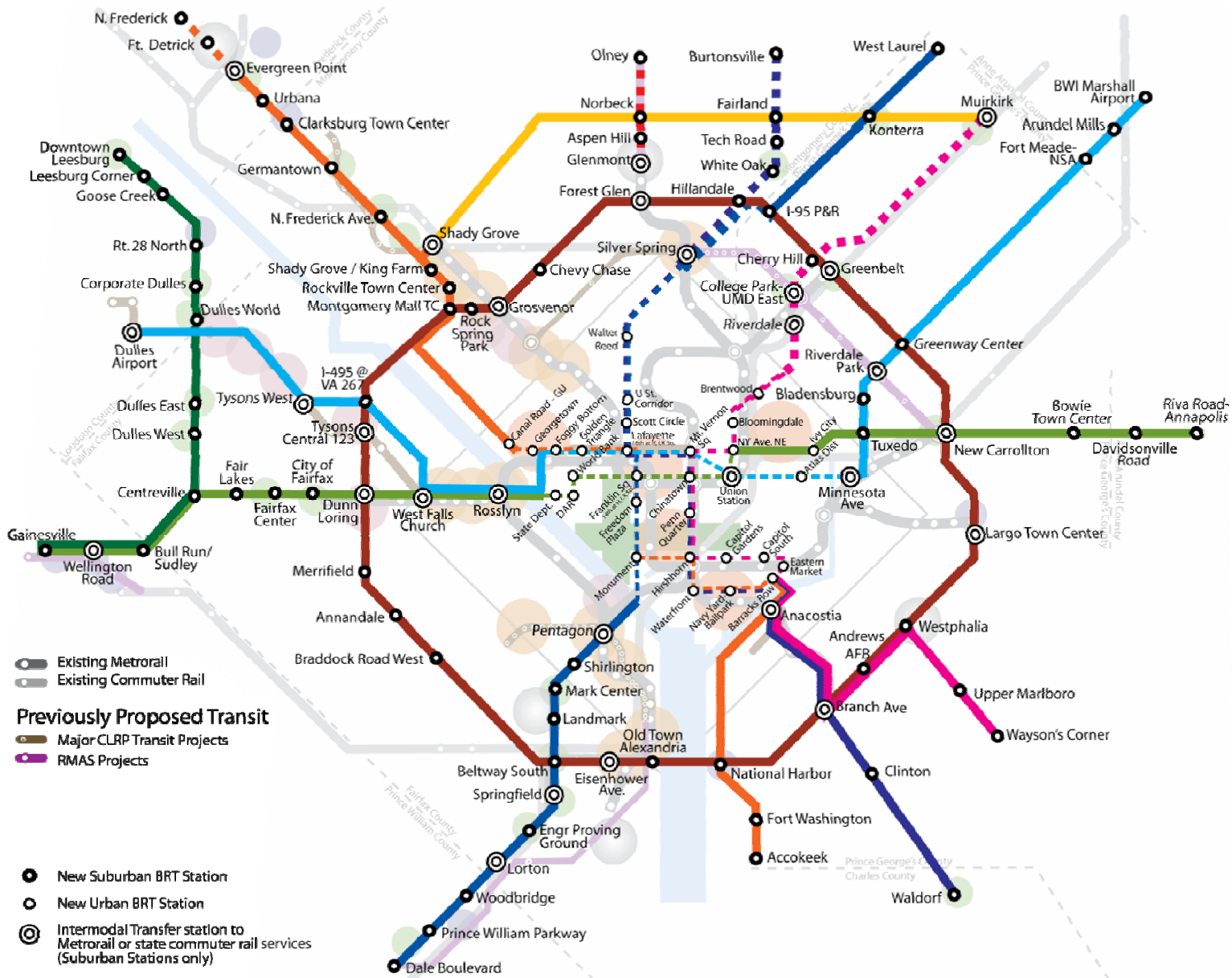


# Layer 3 Transit

# Bus Rapid Transit Regional Network



beginnings      land use      roads and pricing      transit      results      next steps



# High Quality Bus = “Rail-like” Service



beginnings

land use

roads and pricing

transit

results

next steps

## 1. High Speeds

- 45 MPH on toll lanes
- 15 MPH on priority corridors

## 2. Frequent Service

- 10 minute peak and
- 30 minute offpeak headways

## 3. Convenient fare structure

- Same as current services

## 4. Access to Current Transit

- Complements existing transit with transfer opportunities

## 5. Extensive Reach

- Complemented by 15 activity center circulator systems with 10-minute headways (added to activity centers without high quality local bus transit)



Shirlington Transit Center, Arlington, VA

# Transit Summary

beginnings

land use

roads and pricing

transit

results

next steps



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The scenario creates:

**500**-mile regional BRT system

**138** BRT stations located in activity centers and existing parking facilities

**140** miles of circulator service

**5640** new daily hours of transit service

**A vast new transit service is layered on top of the priced lanes to complement existing transit services and concentrated land use**



# Driving Increases



beginnings

land use

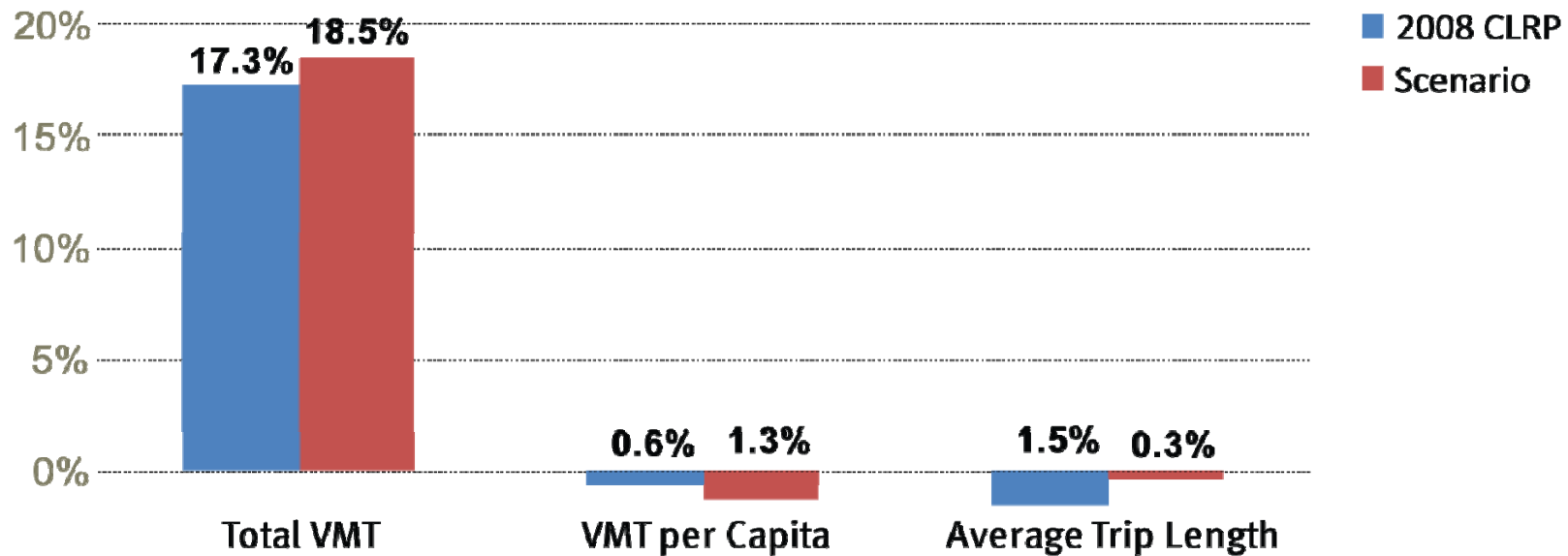
roads and pricing

transit

results

next steps

## Change in Auto Use, 2010-2030



**Scenario adds significant priced road capacity, increasing auto accessibility**

\*results as of 1/20/10

# Congestion Decreases



beginnings

land use

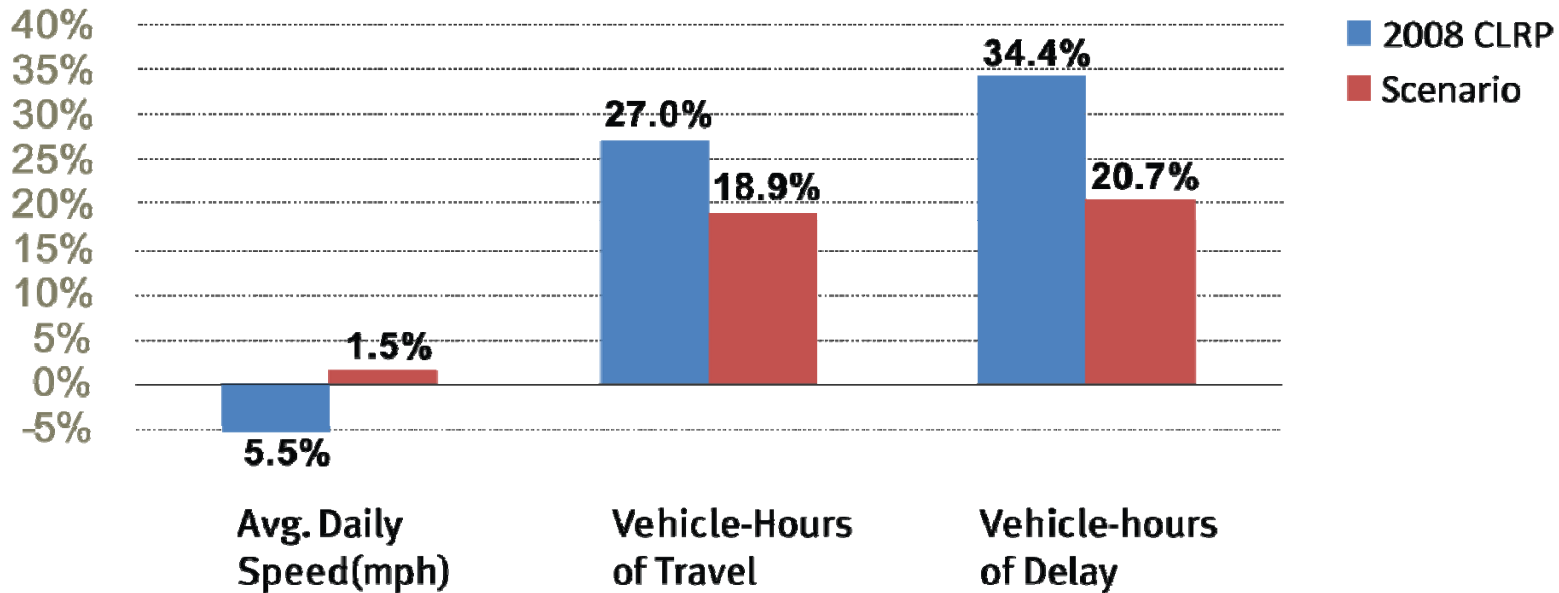
roads and pricing

transit

results

next steps

## Change in Speed, Travel Time and Delay, 2010-2030



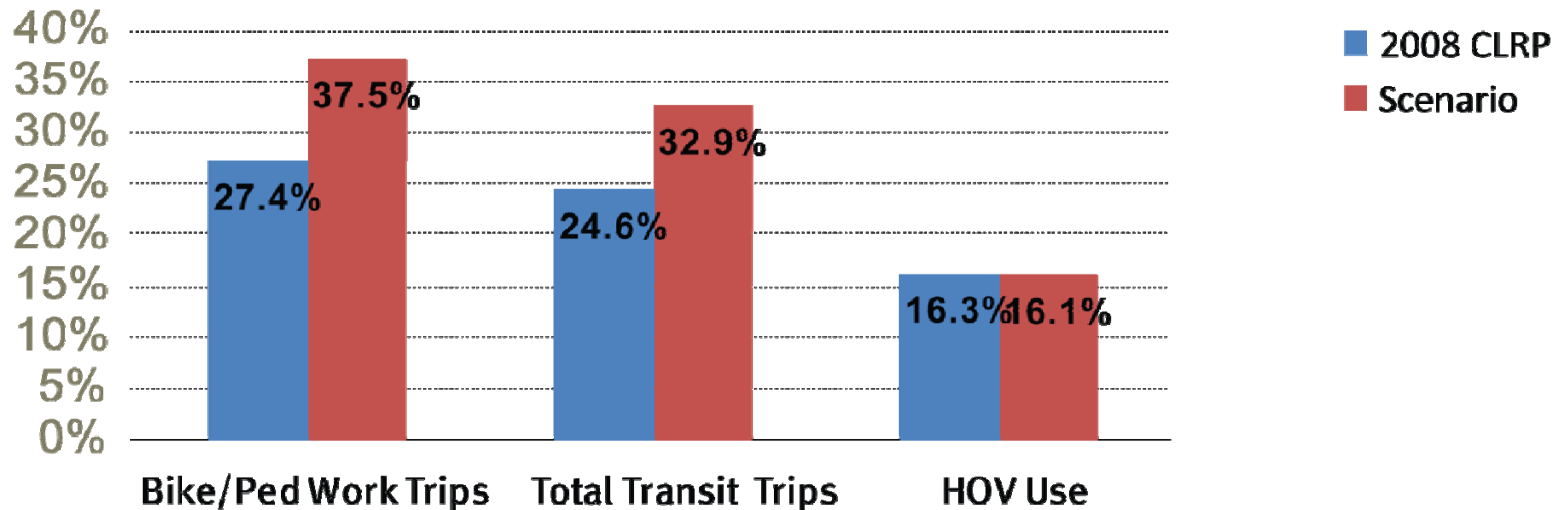
**Average speeds increase, reducing total travel times and delay**

\*results as of 1/20/10

# Transit and Bike/Walk Increases



## Change in Bike/Ped and Transit, 2010-2030



- 1. Moving jobs and housing closer together increases transit, bike, and walk trips**
- 2. Creating a vast transit network increases transit accessibility and attractiveness**

\*results as of 1/20/10

# What Next?

beginnings

land use

roads and pricing

transit

results

next steps



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- 1. Further analysis and sensitivity testing**  
(eg: testing the land use component without the pricing and transit components)
- 2. Final report**  
Complete by June 2010