

The background of the slide is a faded photograph of a transit station. In the foreground, several bicycles are parked. In the middle ground, a person wearing a green jersey with the number '82' is visible. Other people are walking in the background, and a transit vehicle is partially visible on the right side. The overall scene is a busy, urban transit environment.

# ***What If...***

## **The Washington Region Grew Differently?**

***The TPB Regional Mobility and  
Accessibility Scenario Study***

**Seminar on Regional Scenarios and Transit-Oriented Development  
Dulles Area Transportation Association  
Dulles Corridor Rail Association  
October 24, 2006**

**Ronald F. Kirby, Director, Department of Transportation Planning  
National Capital Region Transportation Planning Board (TPB)**

# The Washington Region

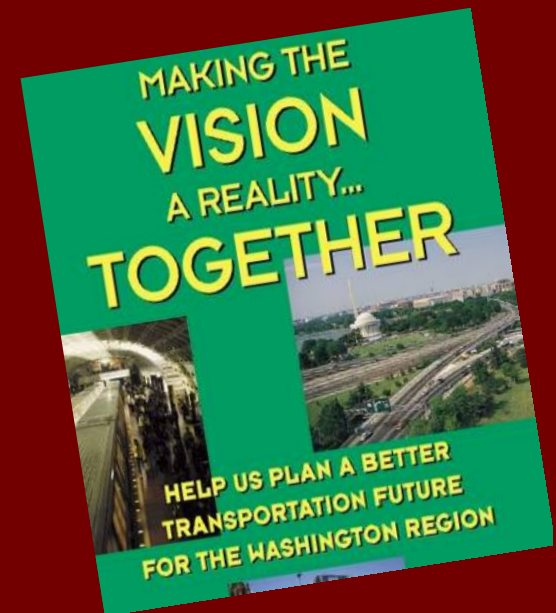


- ☀ Approximately 3,000 square miles
- ☀ Includes 4.5 million people and 2.8 million jobs
- ☀ The National Capital Region Transportation Planning Board (TPB) prepares a financially constrained, 30-year transportation plan for the TPB planning area.

# The TPB Vision

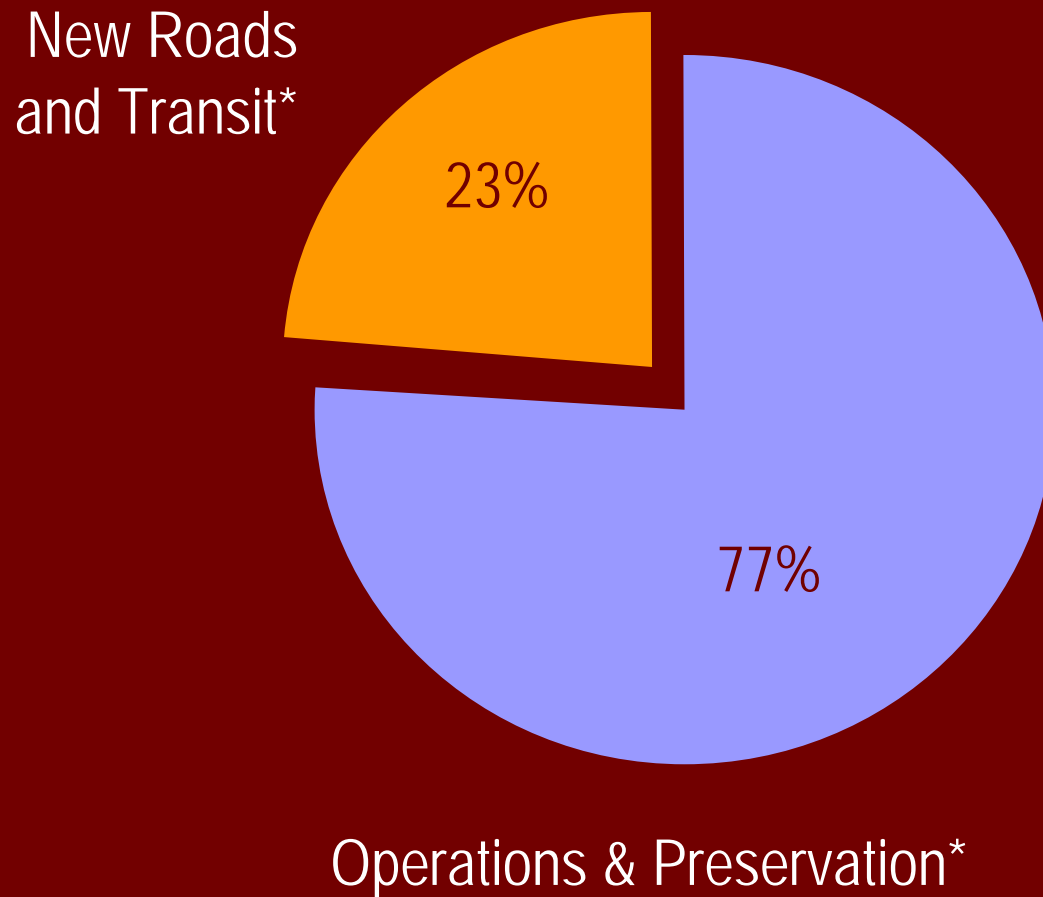
*Approved in 1998*

- A policy framework guiding the region's transportation investments in the 21st century.
- Goals include:
  - Promoting activity centers
  - Increasing transit use
  - Reducing driving



In 2000, the TPB recognized that in many respects, the region's long-range transportation plan was falling short of the Vision...

# Most Transportation Dollars Are Needed for Maintenance



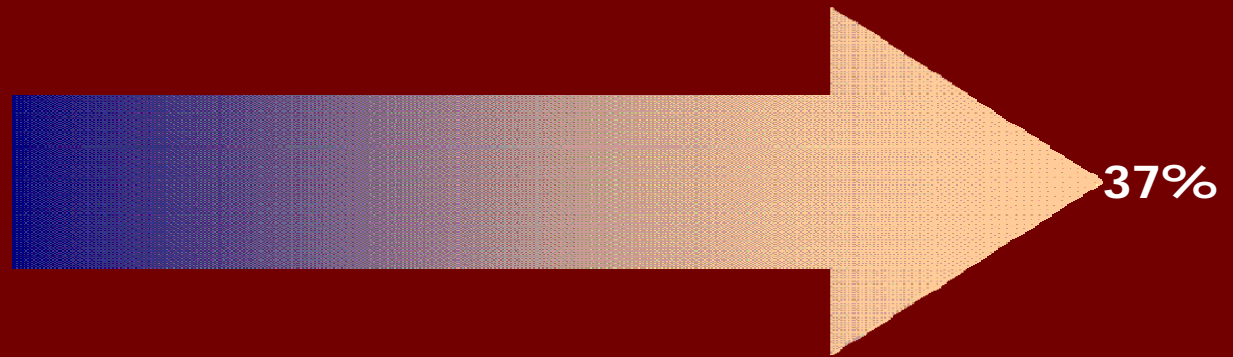
\* Based on region's 2003 Constrained Long-Range Plan

# The Highway System Won't Keep Pace with Growth

*Forecast Trends 2000 - 2030*

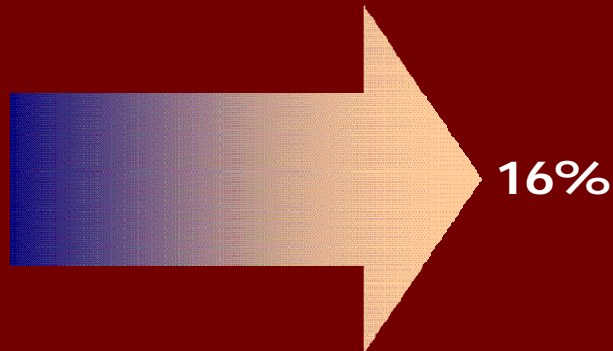
## Daily Vehicle Miles Traveled

2000: 109 Million  
2030: 150 Million



## Freeway and Arterial Lane Miles

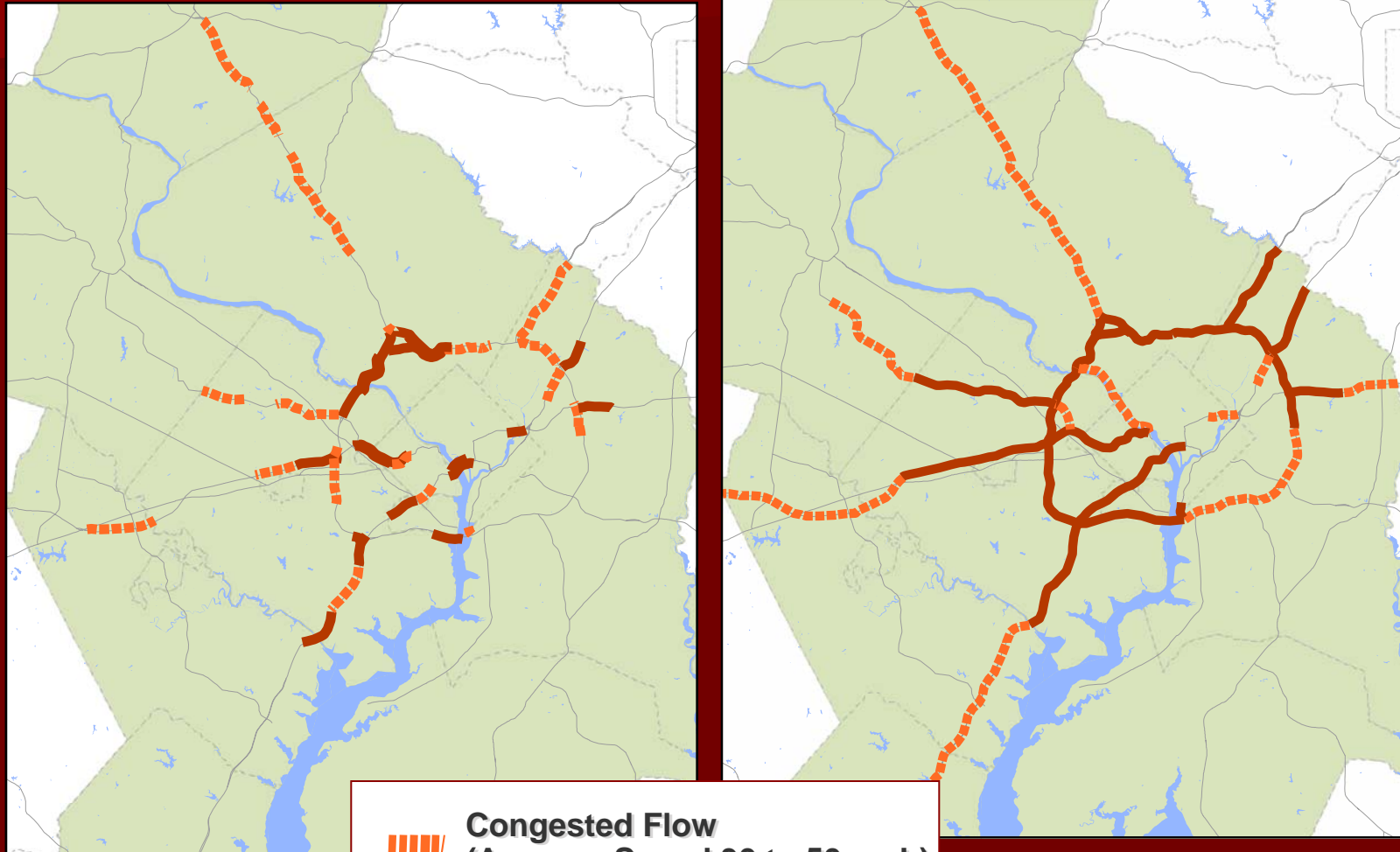
2000: 15,300 Miles  
2030: 17,600 Miles




Based on region's 2003 Constrained Long-Range Plan

# Most of the Beltway Will Be Stop and Go

Evening Highway Congestion 2000 and 2030



 Congested Flow  
(Average Speed 30 to 50 mph)

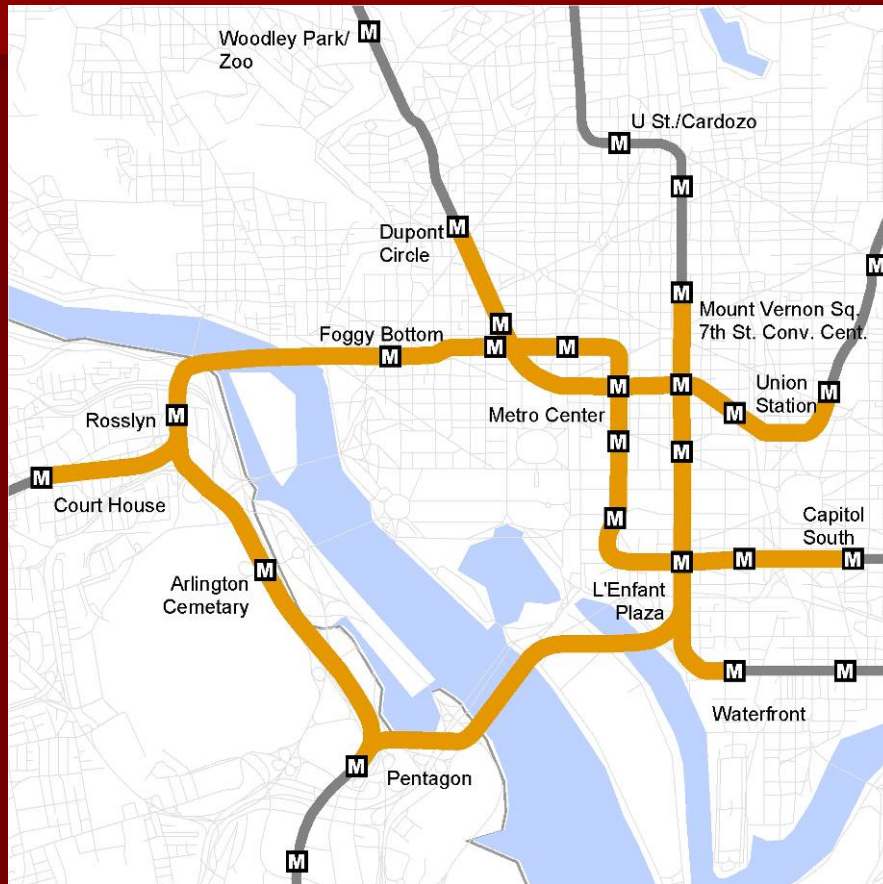
 Stop and Go Conditions  
(Average Speed < 30 mph)



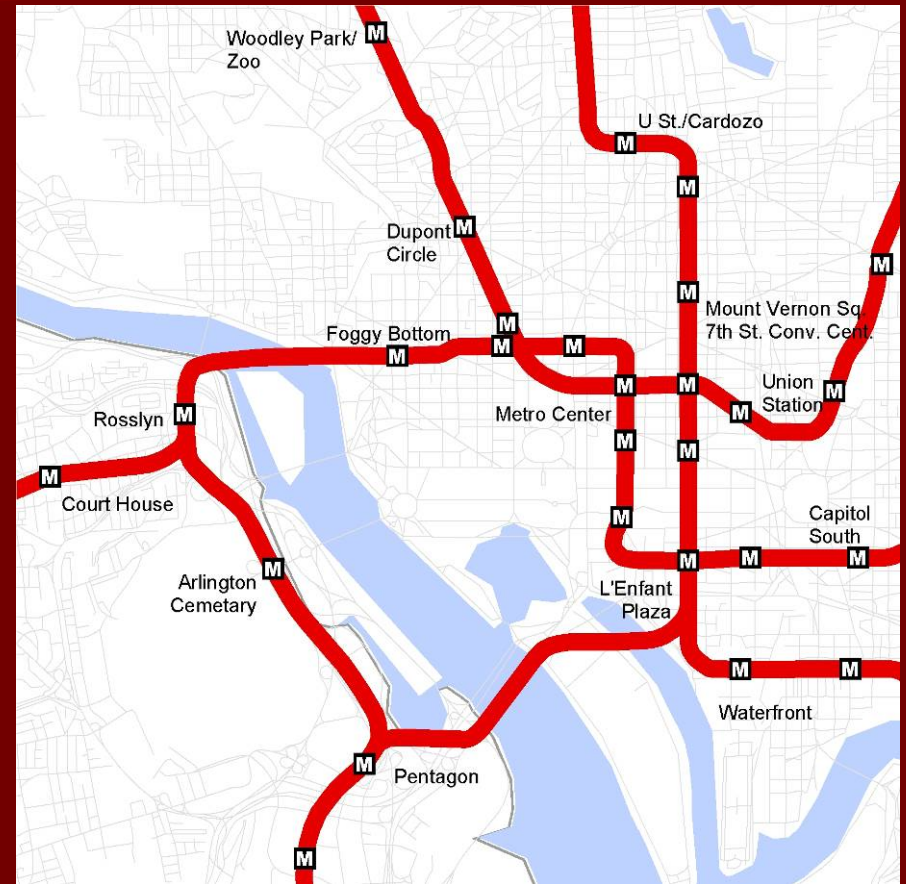


# Metro Platforms and Trains Will Be Packed

Morning Peak-Hour Transit Congestion: 2000 and 2030



2000



2030

— Congested  
— Highly Congested



# How can we move closer to the Vision?

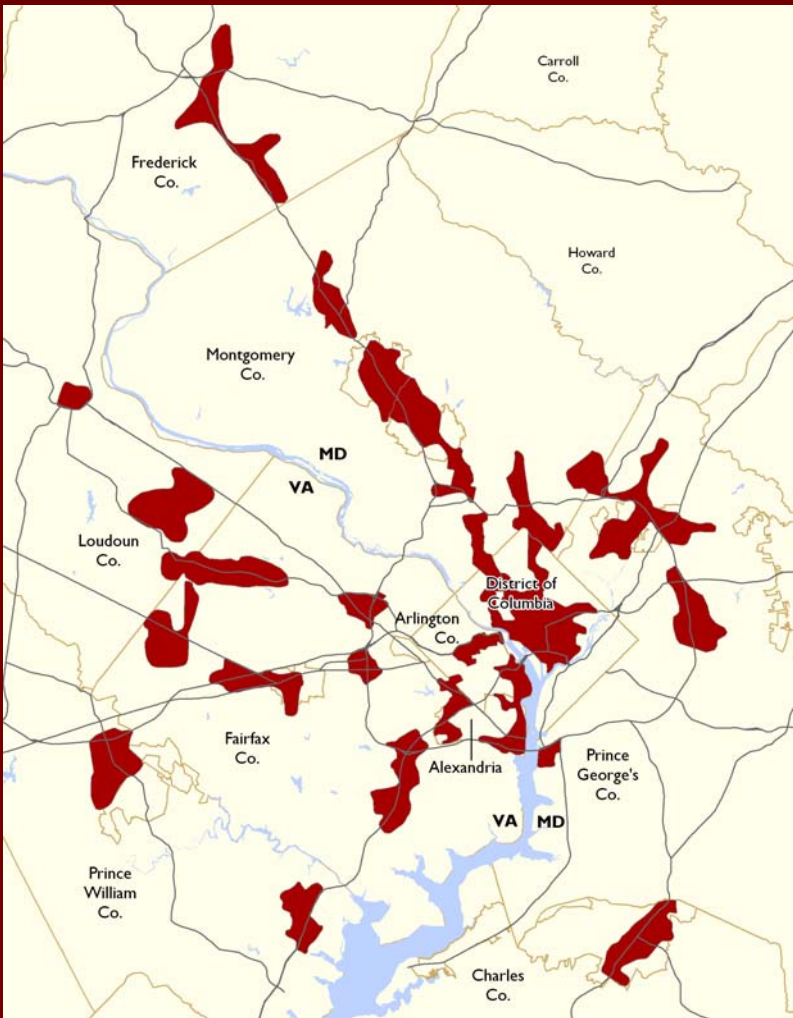
In 2000, the TPB initiated a study to investigate scenarios that might better meet the objectives of the Vision:

- Promoting activity centers
- Increasing transit use
- Reducing driving

# Study of “What If” Scenarios

- *What if* job and housing growth were shifted? *What if* new roads or transit were built?
- How would 2030 travel conditions change?
- Not looking at “how to,” just “what if.”

# The Study focuses on Regional Activity Centers

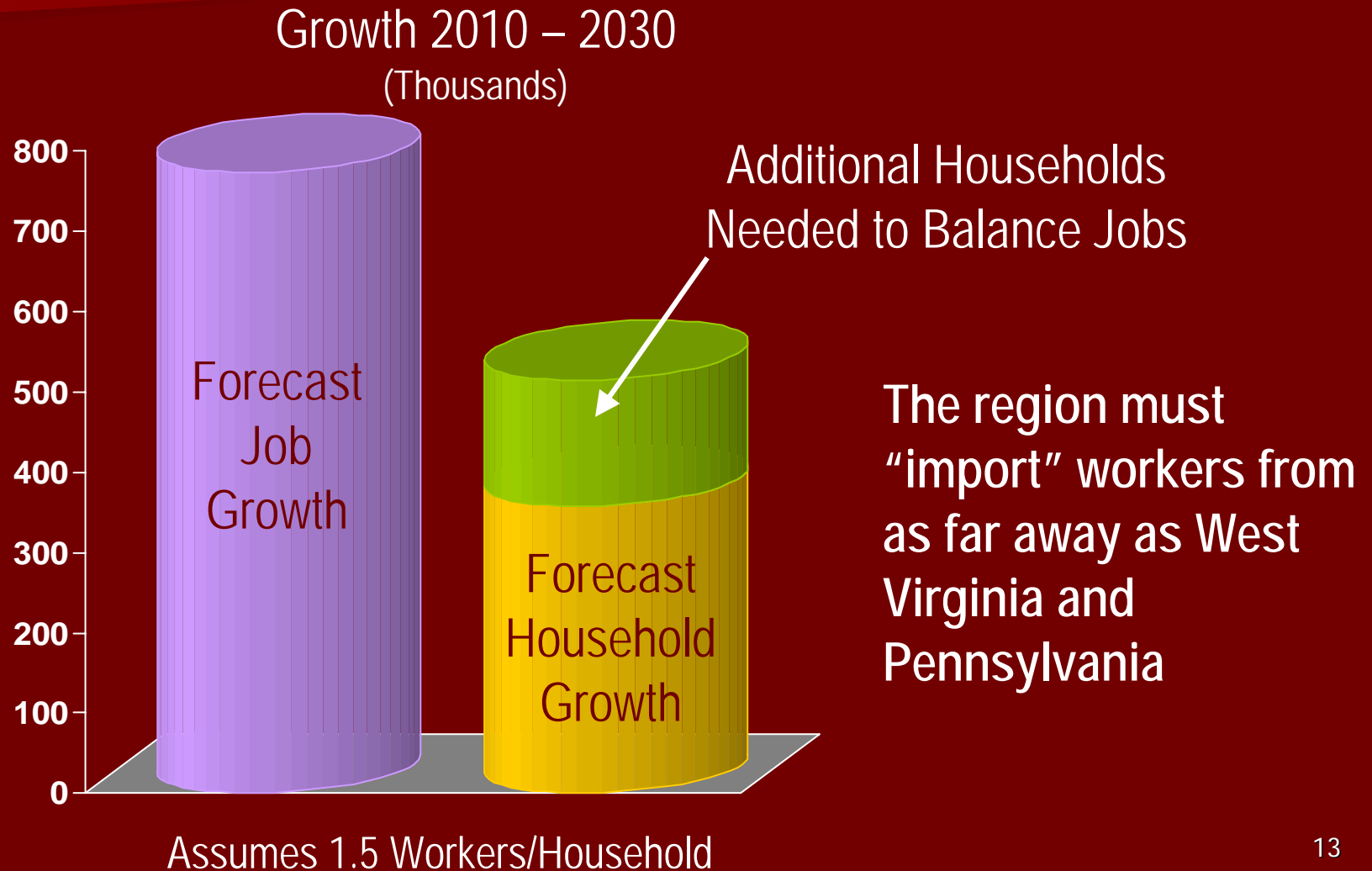


Intended to be focal points for jobs and housing, and nodes for transportation linkages.

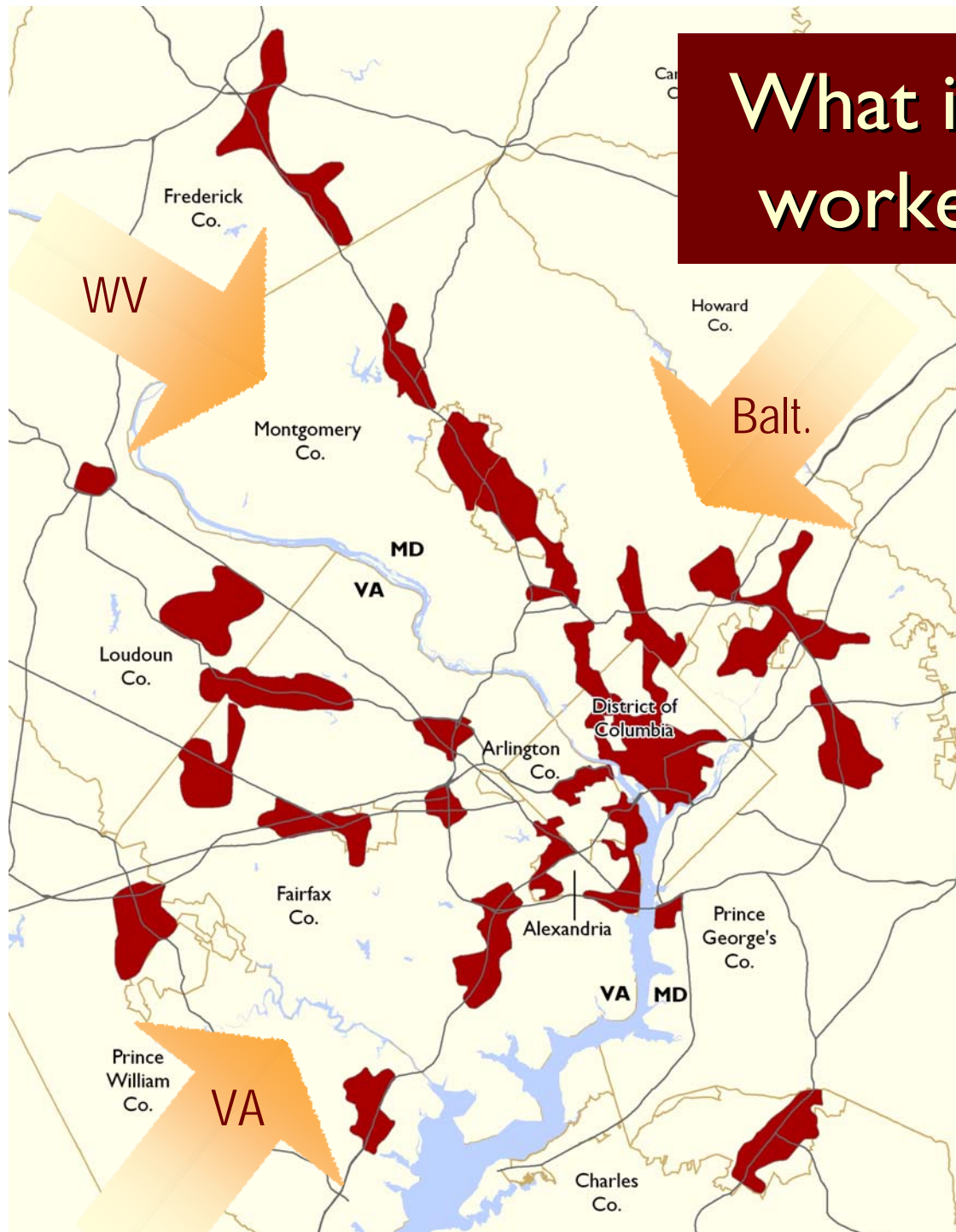
## *Developing the Scenarios:*

What are **key issues**  
related to land use and  
transportation?

# Issue #1: Job Growth is Outpacing Household Growth



# What if more people who worked here lived here?



## “More Households” Scenario

- Increase household growth to balance forecast job growth
- Locate households in regional “Activity Clusters”

Increase household growth by 200,000



Regional Activity Cluster

# Issue #2: Workers are Living Farther Away from Their Jobs

- Inner jurisdictions  
– most job growth
- Outer jurisdictions  
– lion's share of household growth

**How Far Is Too Far?**  
*Developer Plans 4,300 Homes 100 Miles From D.C.*






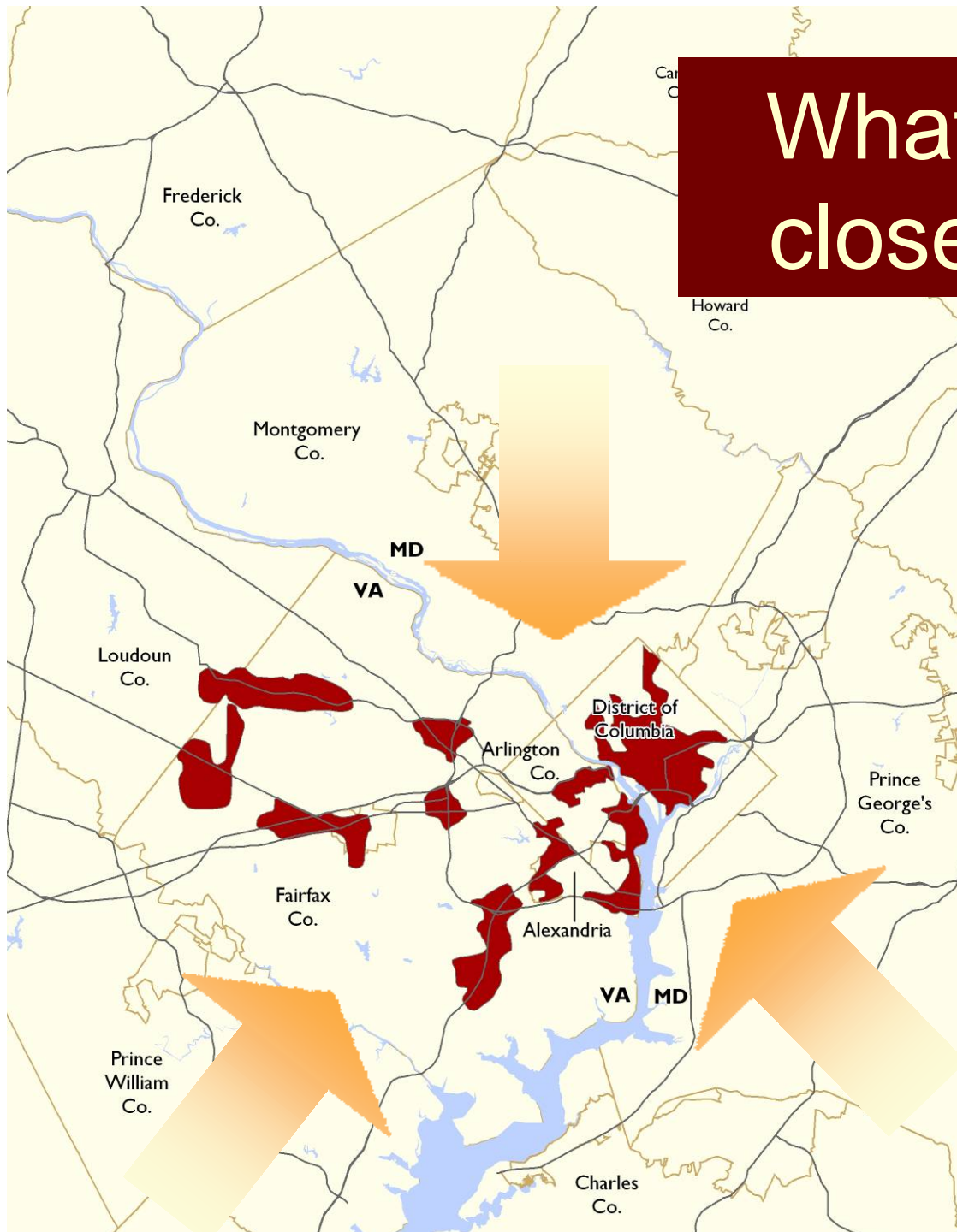
# What if people lived closer to their jobs?

## “Households In” Scenario

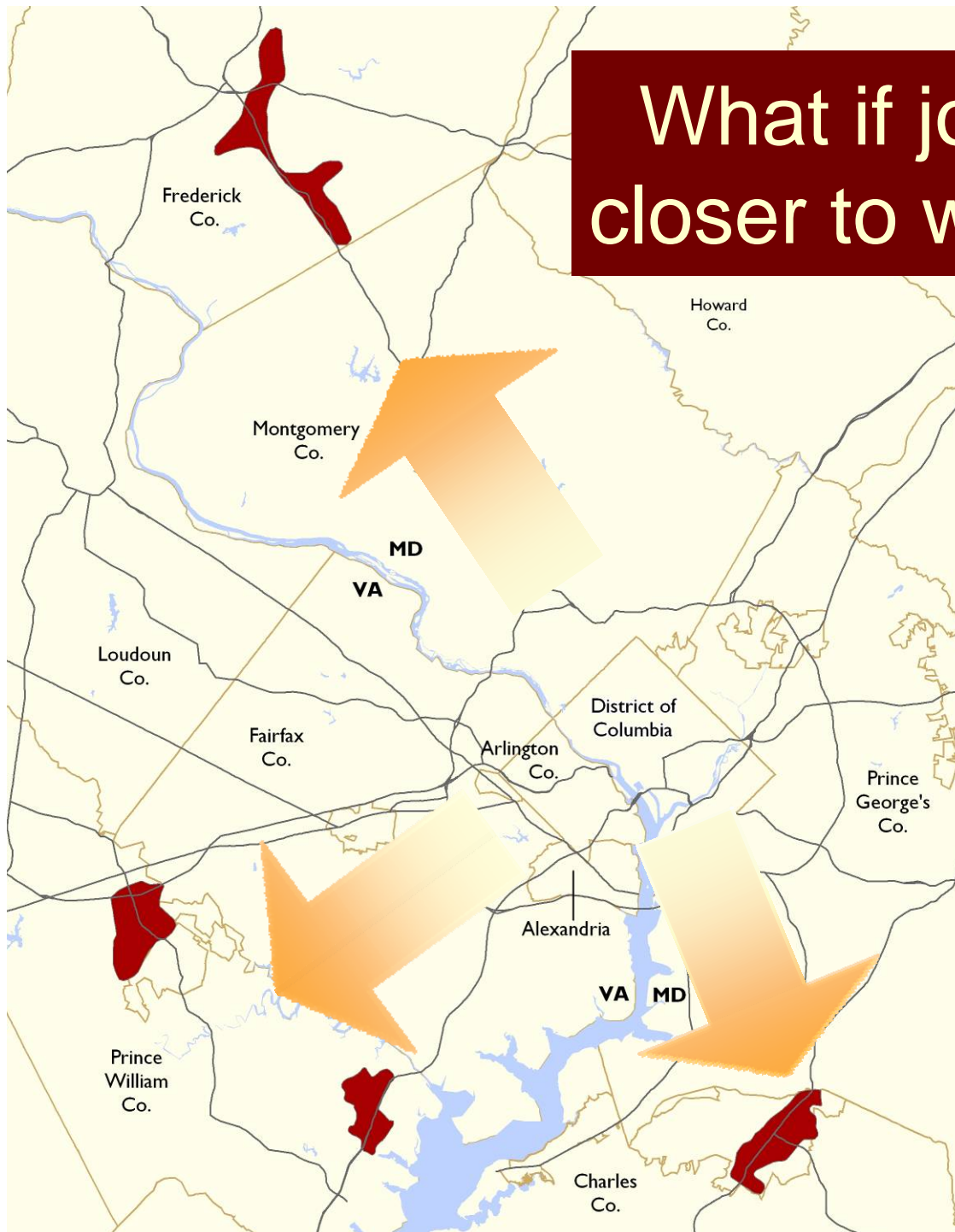
- Shift household growth within the region from outer to inner jurisdictions (to get people closer to jobs)

Shift 84,000 households

 Regional Activity Cluster




# What if jobs were located closer to where people live?



## “Jobs Out” Scenario

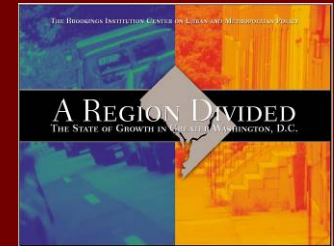
- Shift job growth to outer jurisdictions (to get jobs closer to new housing)

Shift 82,000 jobs

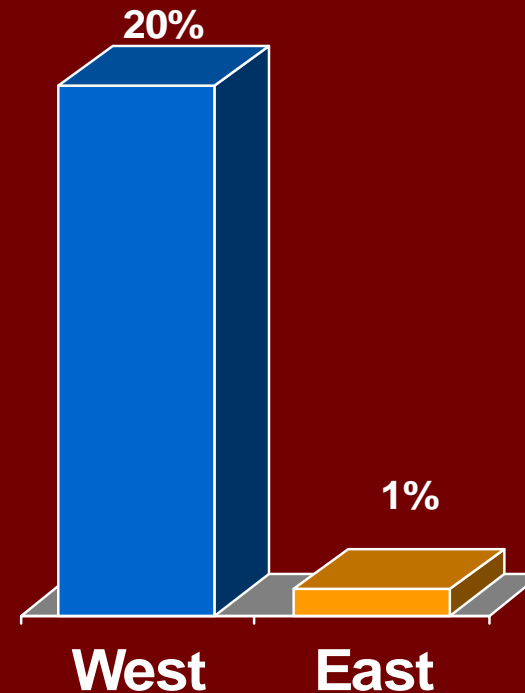
 Regional Activity Cluster

# Issue #3: East-West Divide

*A 1999 Brookings Institution report highlighted disparities between the eastern and western parts of the region*

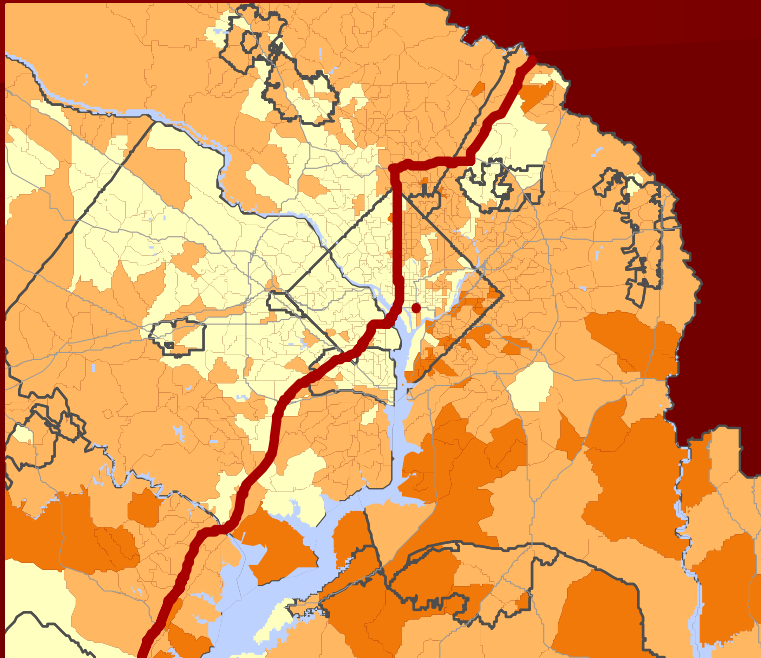


Job Growth Rate 1990 – 2000



# Issue #3: East-West Divide

*West-bound travel clogs the roads during morning rush hour*

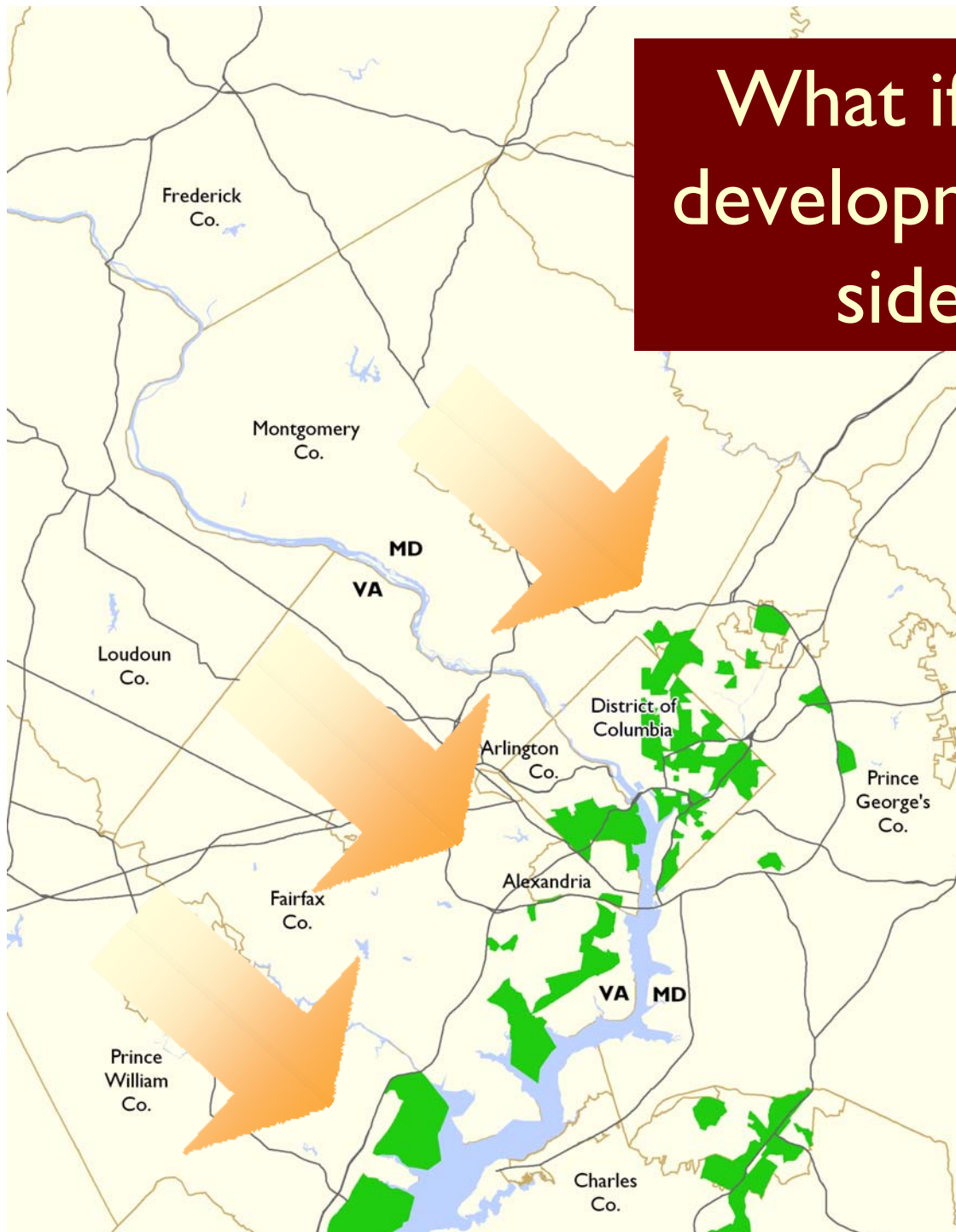


## Average Commute Time





What if there were more development on the eastern side of the region?



## “Region Undivided” Scenario

- Shift job and household growth from West to East

Shift 57,000 households and 114,000 jobs

 Areas Receiving Job Growth

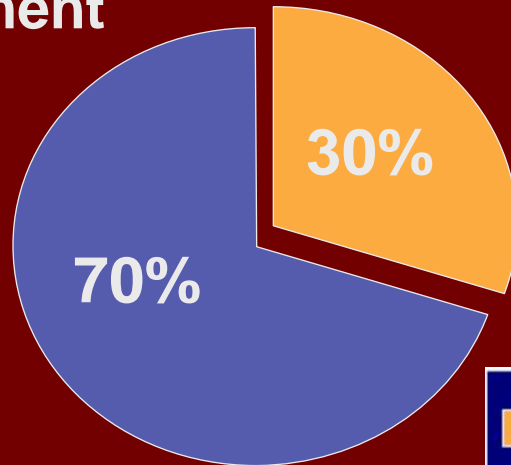
# Under the Region Undivided Scenario, Largo Town Center would have three times as many jobs...

*With densities that might look something like this:*

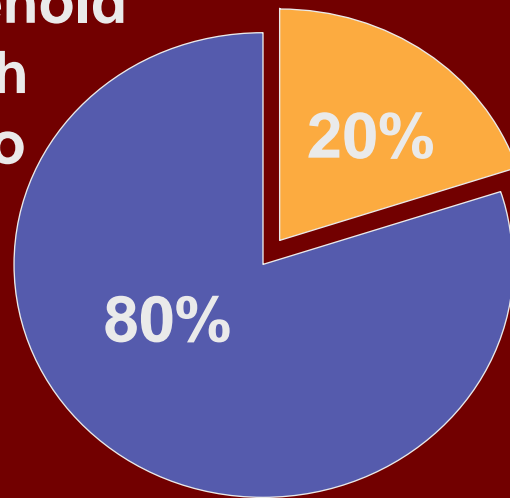


# Issue #4: Most Growth Located Outside Transit Station Areas

Employment  
Growth  
2010 to  
2030



Household  
Growth  
2010 to  
2030



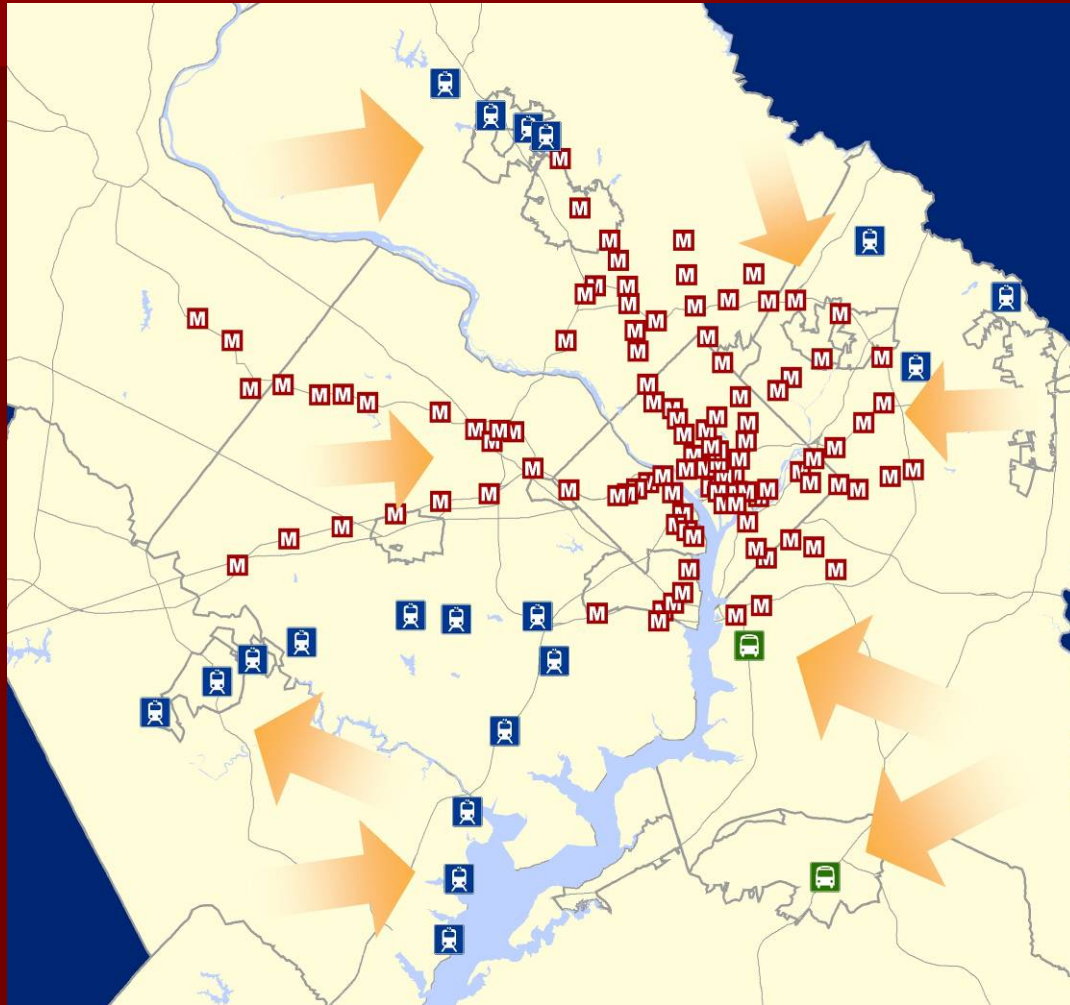
Inside Transit  
Station Areas

Outside Transit  
Station Areas





# What if people lived and worked closer to transit?



## “Transit-Oriented Development” Scenario

- Locate job and household growth around transit stations

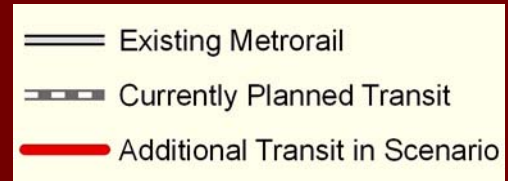
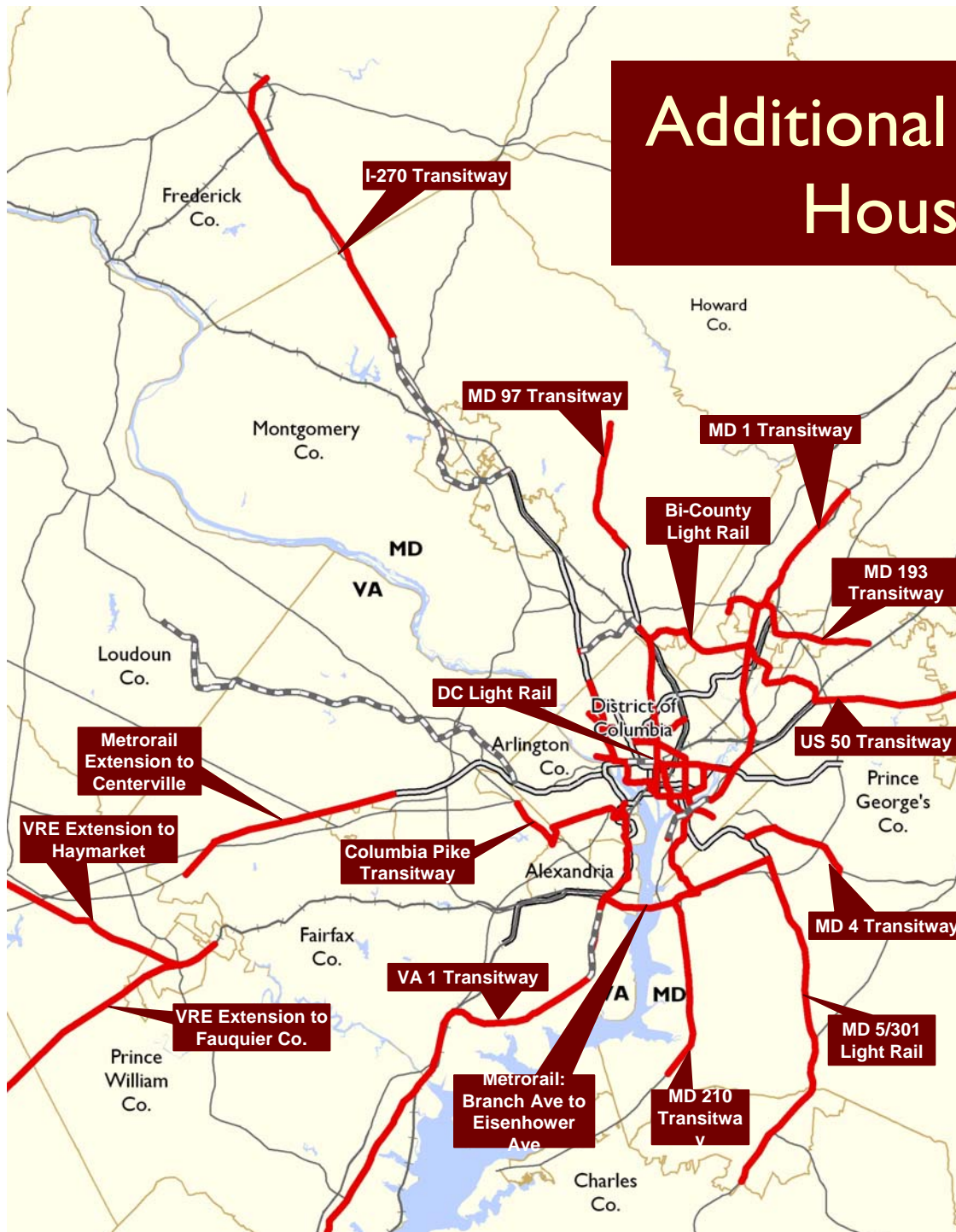
Shift 125,000 households and 150,000 jobs

# **Transit Networks Were Tailored to Each Scenario**

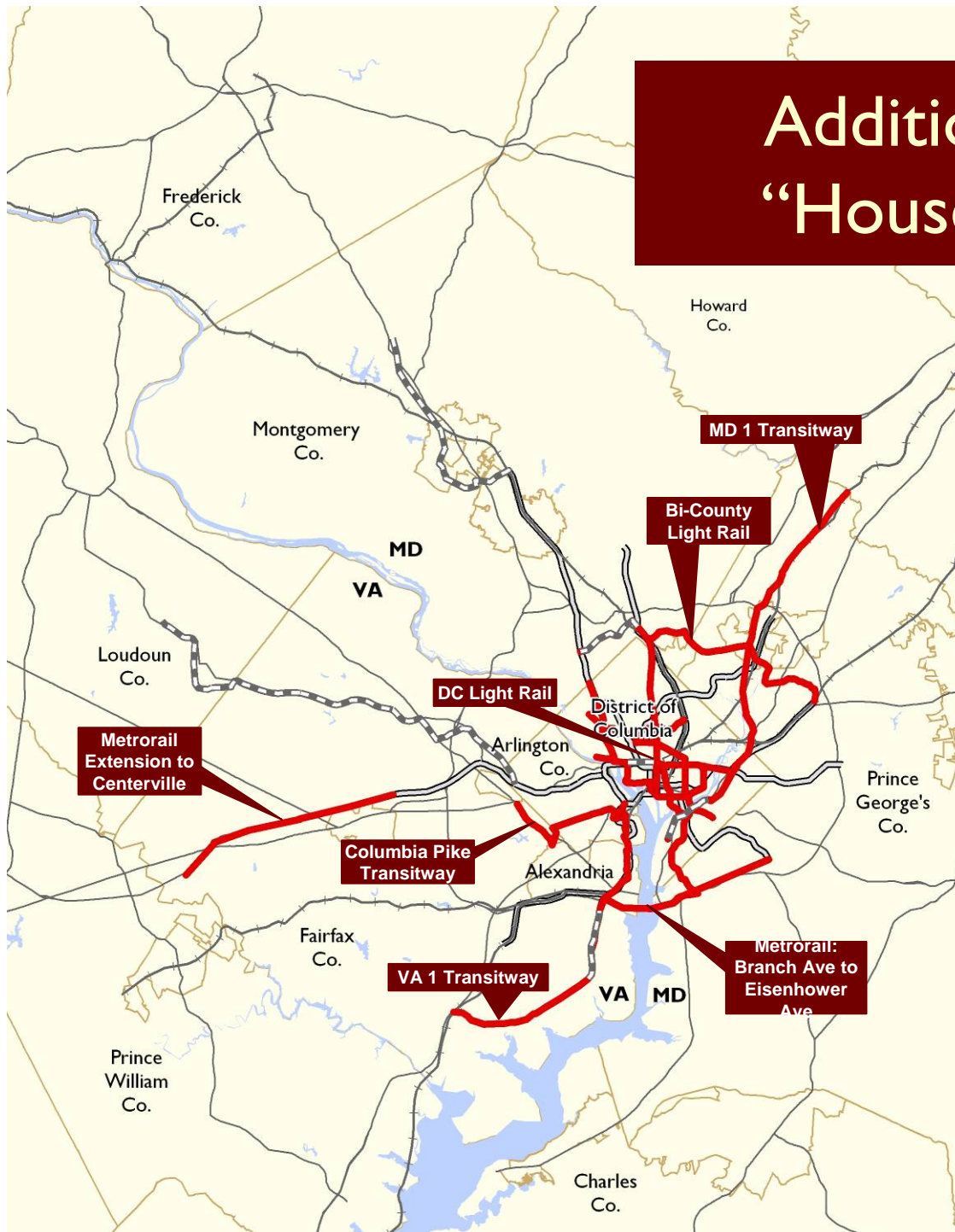
# Additional Transit for the “More Households” Scenario

*Also used in TOD Scenario*

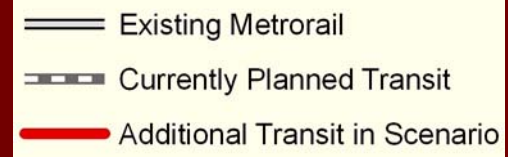
- 30 miles of new Metrorail
- 30 miles of new commuter rail
- 218 miles of new light rail and bus rapid transit



# Additional Transit for the “Households In” Scenario

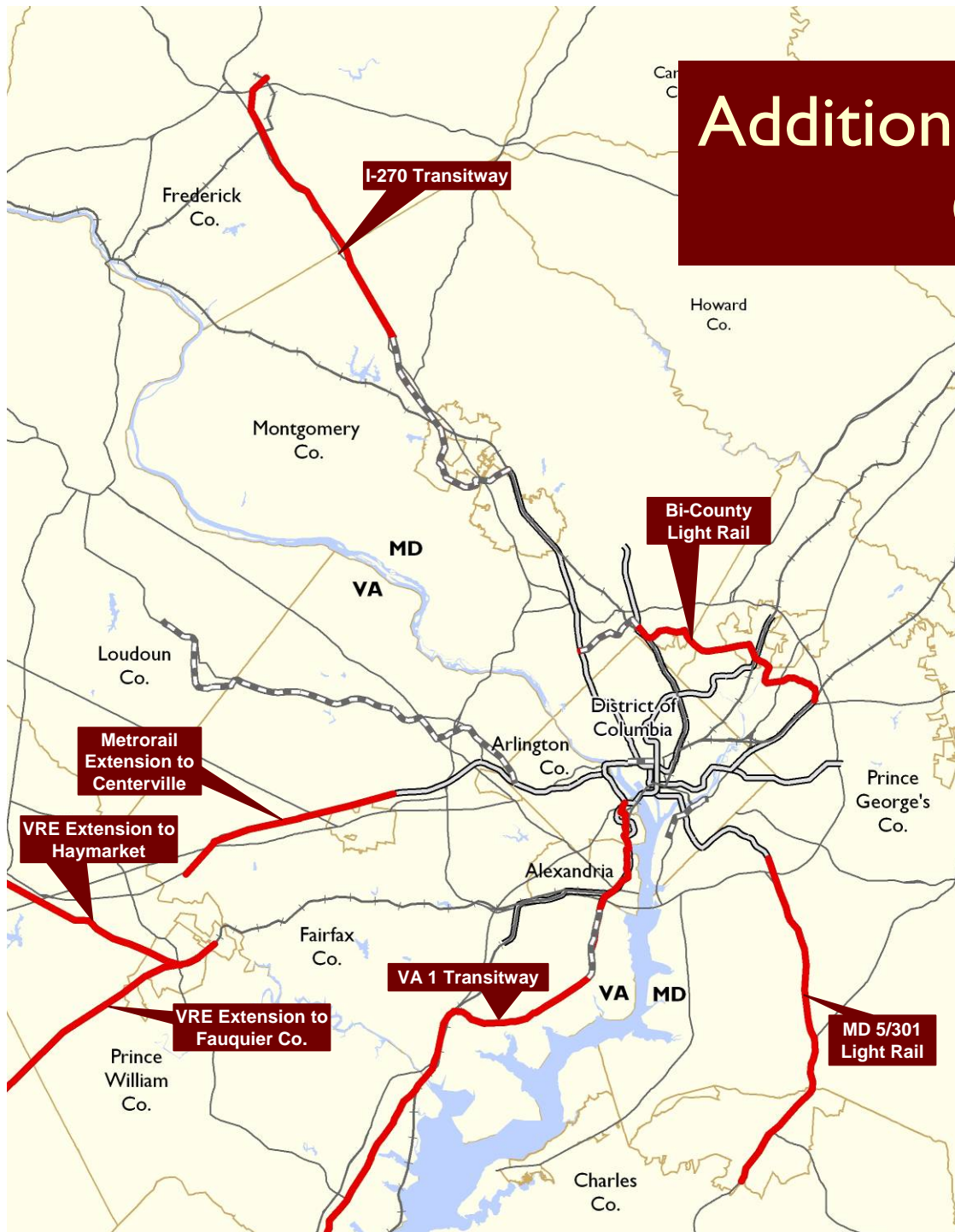


- 30 miles of new Metrorail
- 121 miles of new light rail and bus rapid transit



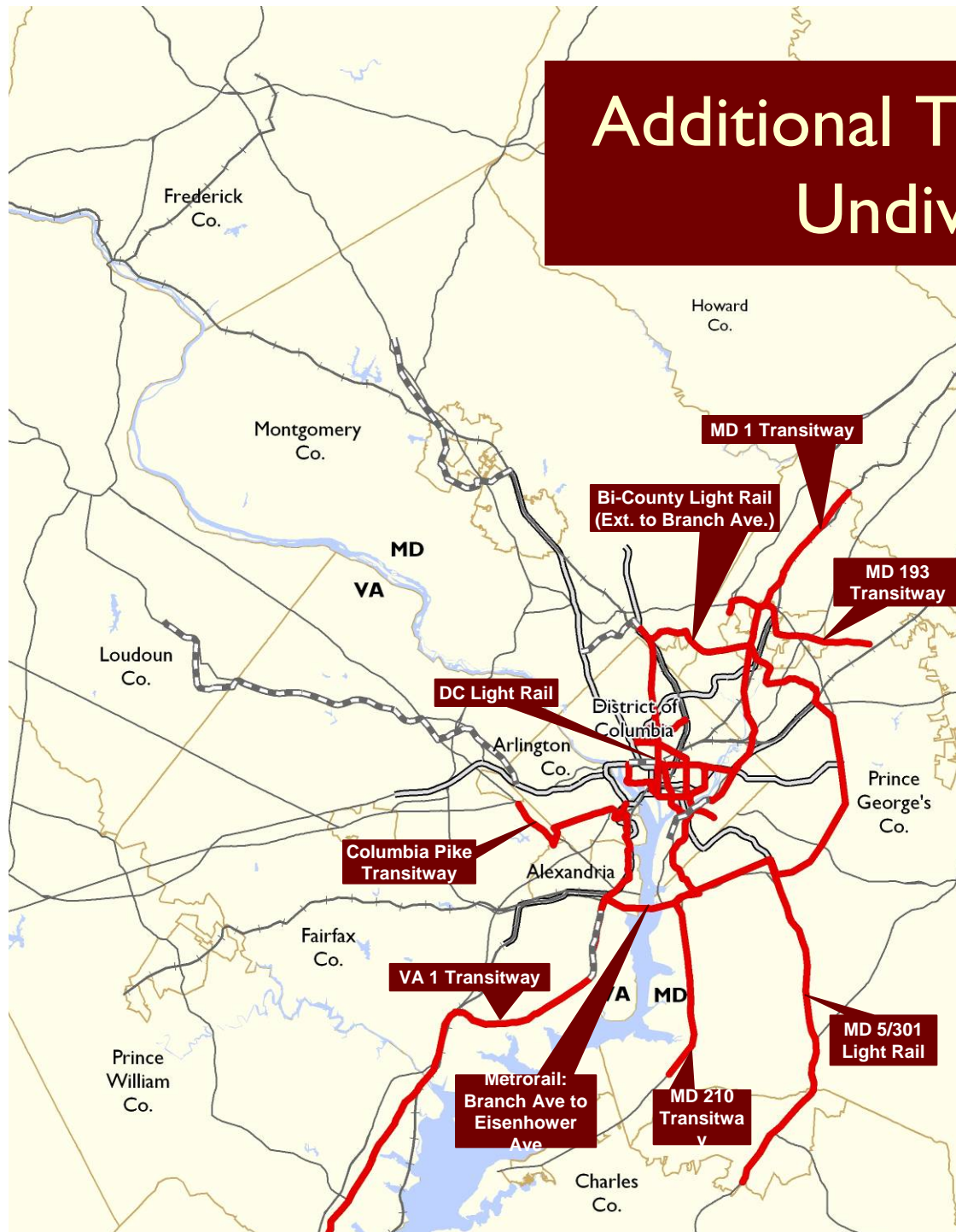


# Additional Transit for the “Jobs Out” Scenario



- 18 miles of new Metrorail
- 30 miles of new commuter rail
- 82 miles of new light rail and bus rapid transit

# Additional Transit for the “Region Undivided” Scenario



- 13 miles of new Metrorail
- 180 miles of new light rail and bus rapid transit

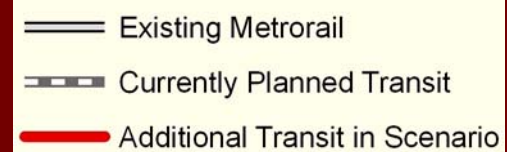


# Additional Transit for the “TOD” Scenario

## “Transit Oriented Development” Scenario

- Locate job and household growth around transit
- Same transit network as “More Households” scenario

Shift 125,000 households and 150,000 jobs

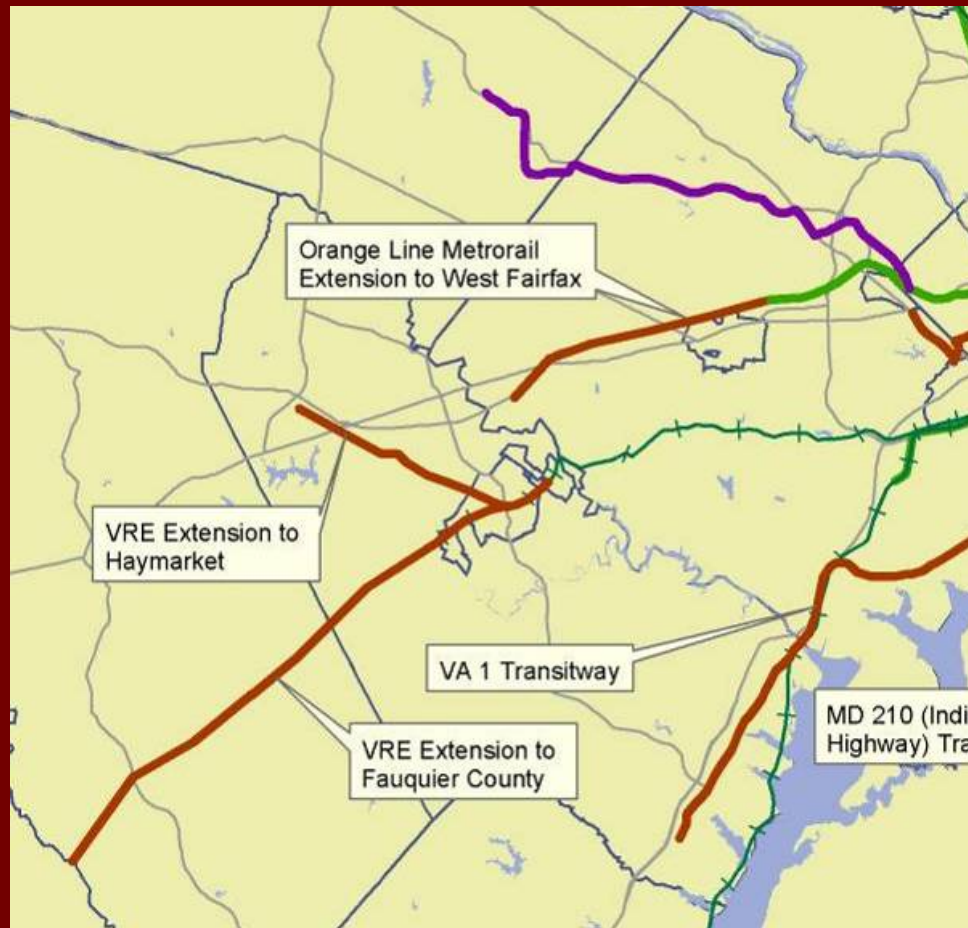

  
 Existing Metrorail  
 Currently Planned Transit  
 Additional Transit in Scenario





# Northern Virginia Elements

## More Transit



- Rail to Centreville
- VRE to Haymarket and to Fauquier County
- VA 1 Transitway
- Rail to Dulles is in the baseline.

# ***Northern Virginia Elements*** **Effective land use around transit...**

*More jobs and housing would be clustered around **future** transit lines, like Rail to Tysons and to Dulles...*



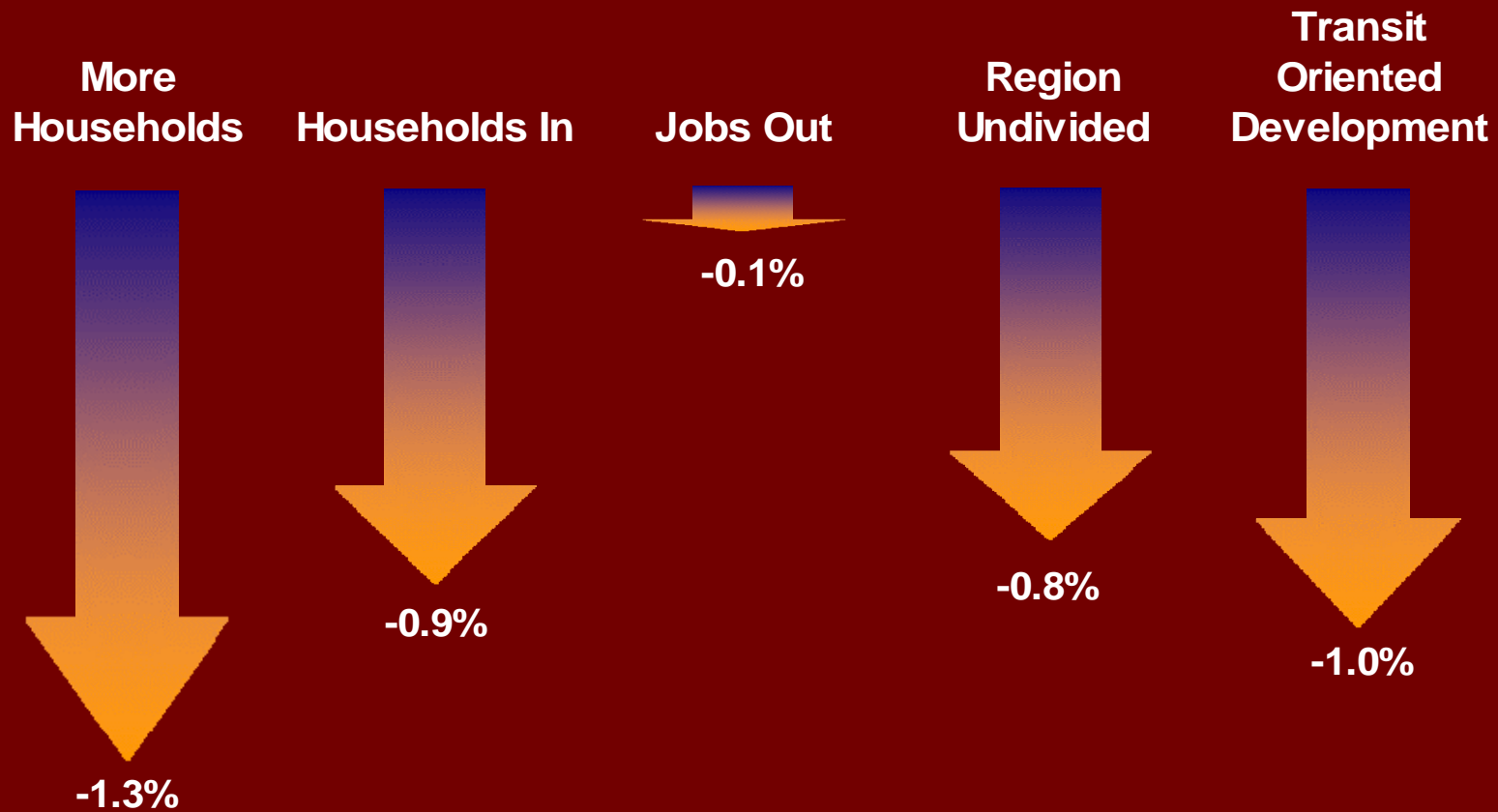
## *Evaluating the Scenarios:*

How would **future travel conditions** change?

# Driving would decrease

Compared to baseline forecasts for 2030

## Vehicle Miles Traveled



**Under the “More Households”  
scenario, the average person would  
drive 2 miles less per day . . .**



**Daily vehicle miles  
traveled per person**

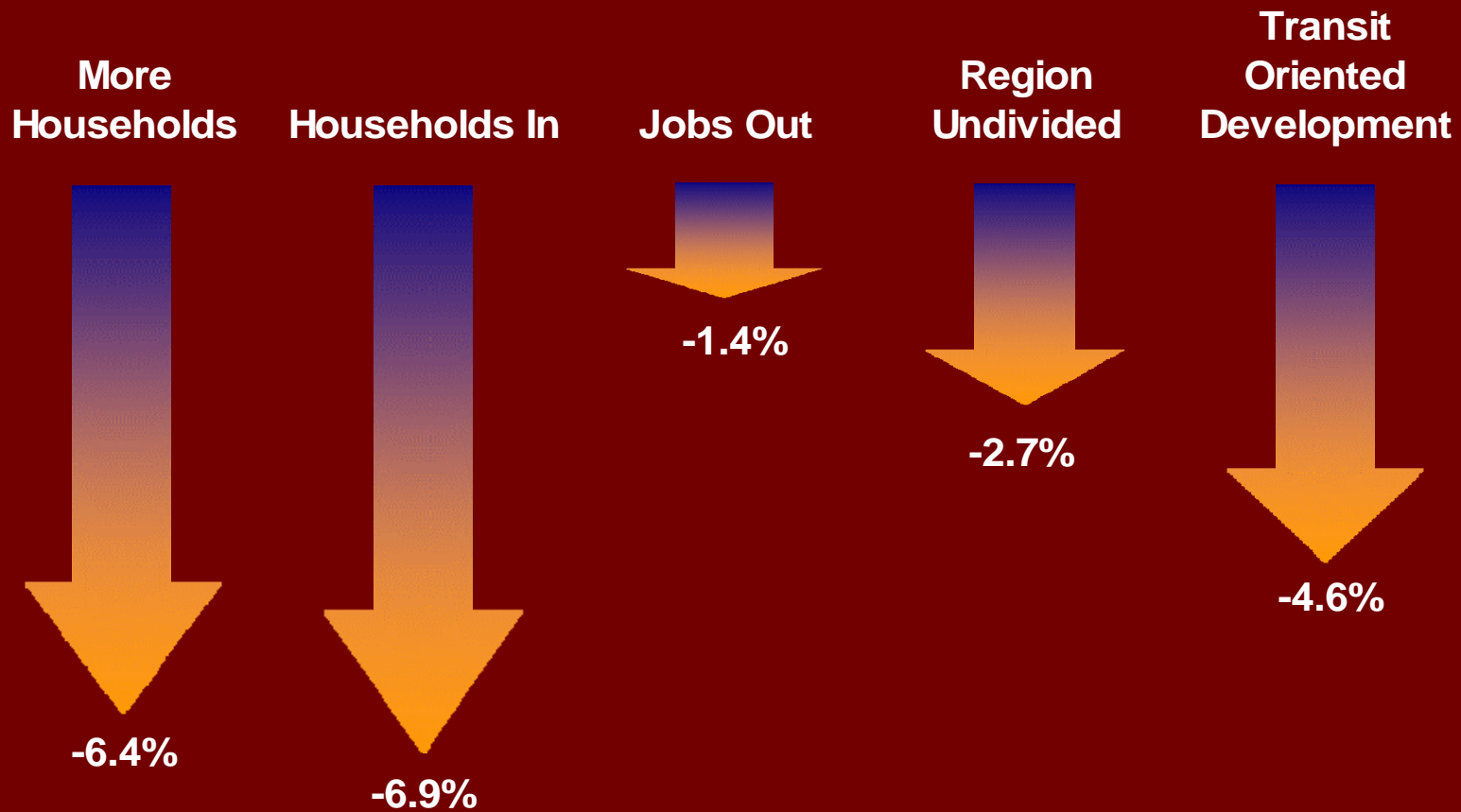
*Baseline:* **24**

*“More Households”:* **22**

# Congestion would decrease

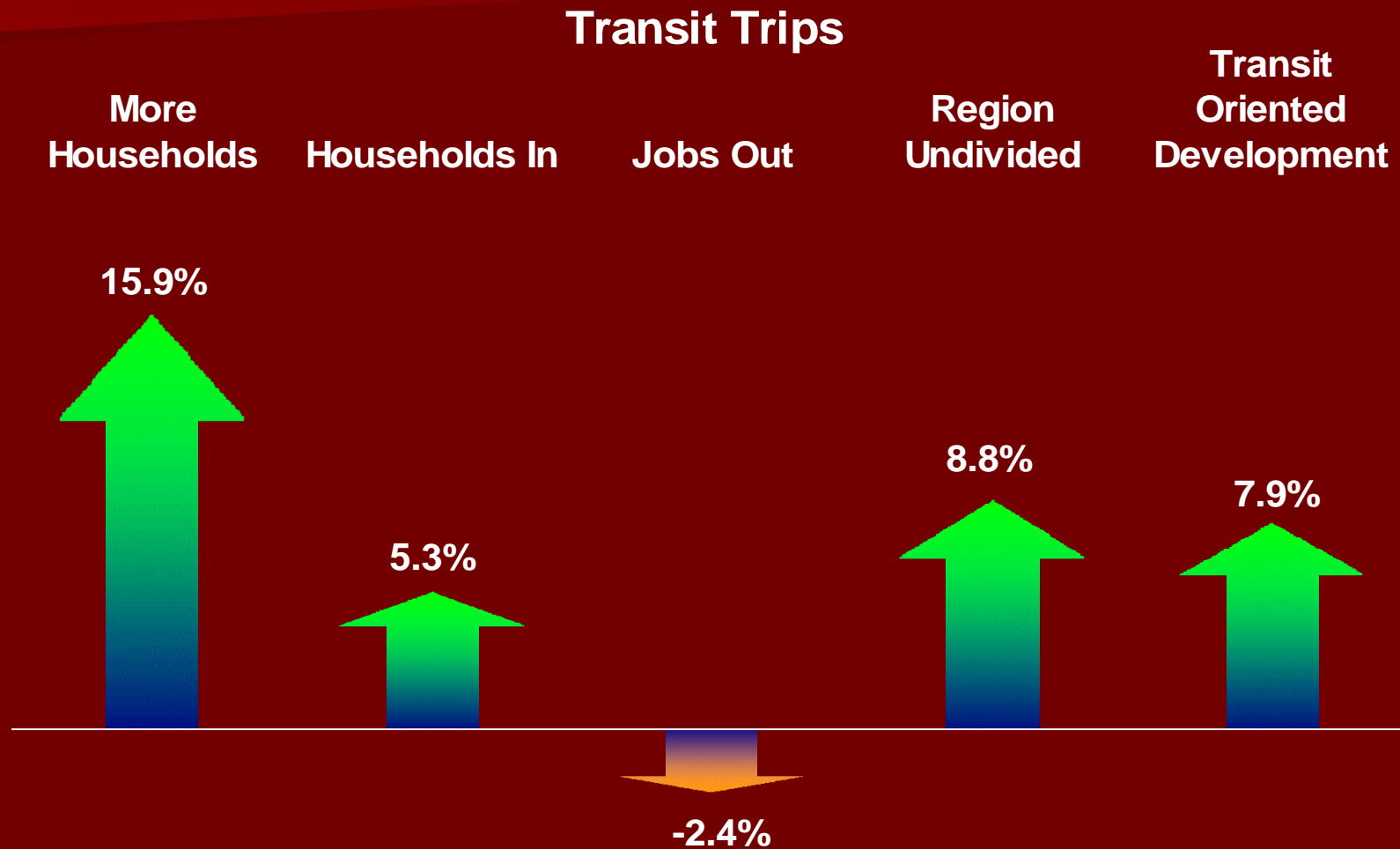
Compared to baseline forecasts for 2030

## Lane Miles of Severe AM Peak Period Congestion



# Transit use would increase\*

Compared to baseline forecasts for 2030



\*Under the "Jobs Out" scenario, transit trips would increase in outer suburban activity clusters



# Local impacts would be even bigger, in many places

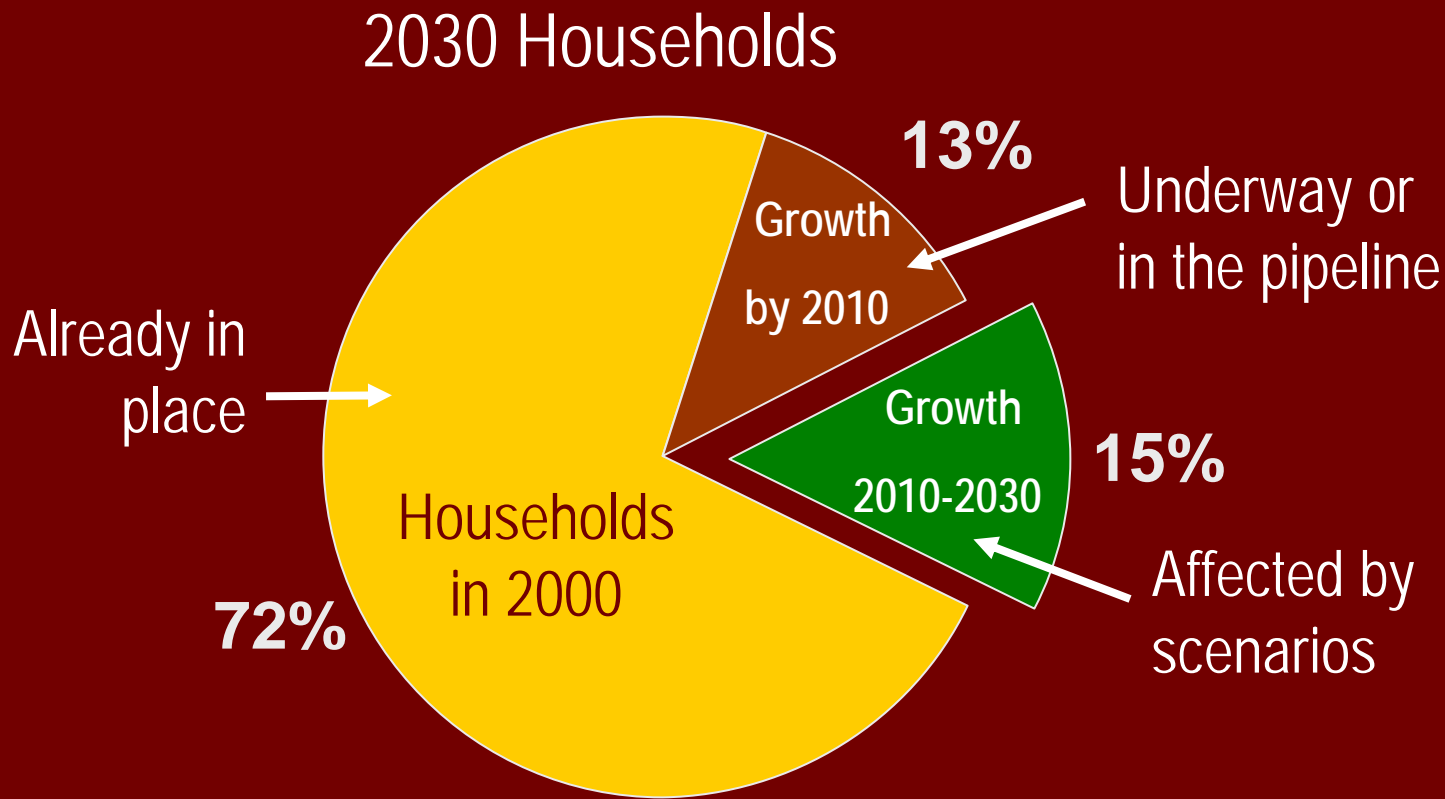


*Under the “Region Undivided” scenario:*

**Transit commute trips to the Largo area would more than double,** increasing the transit commute mode share from 9% to 15%.

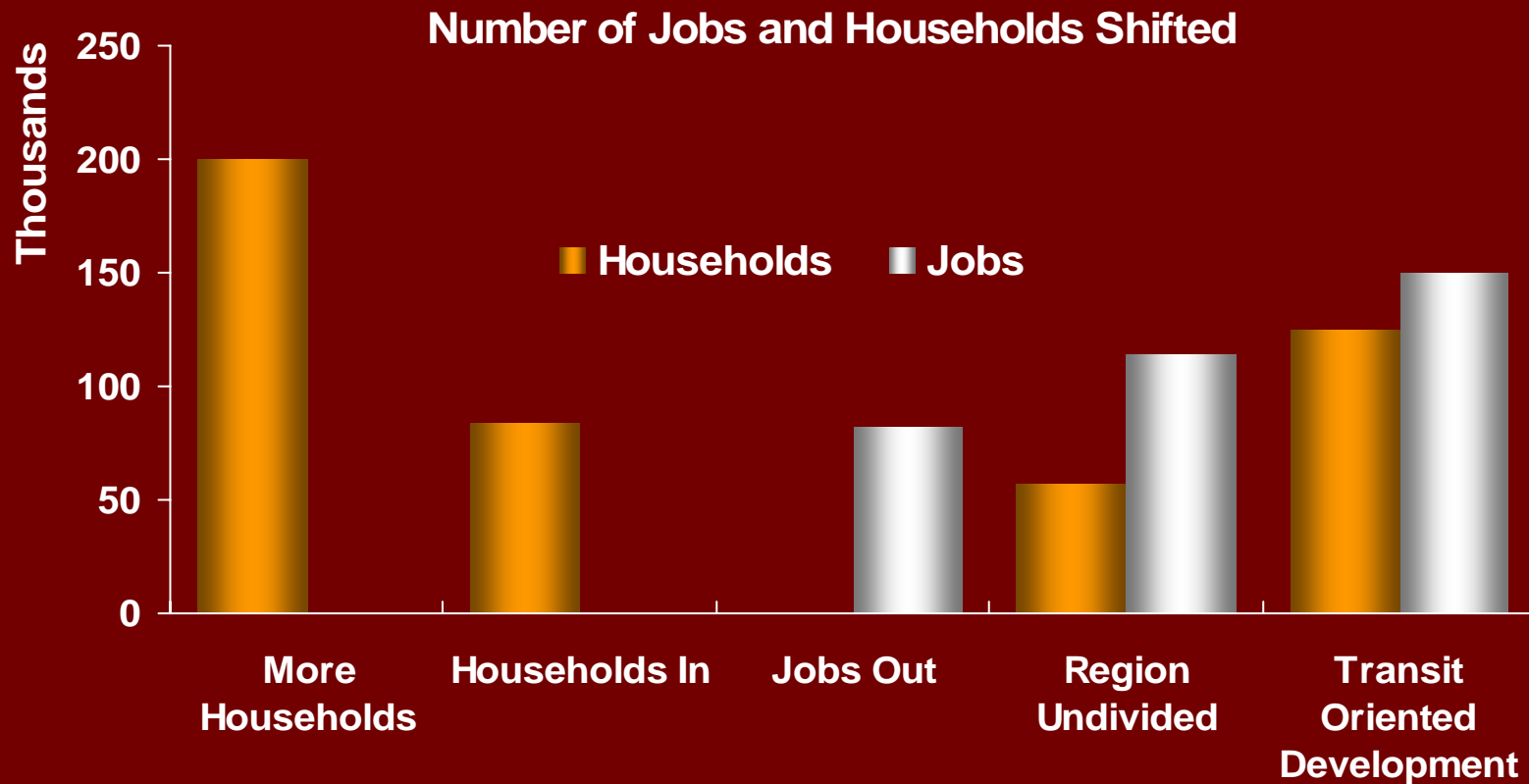
# Some Caveats:

Scenarios shift a relatively small percent of the total jobs and households anticipated for 2030



# Some Caveats:

Some scenarios make more dramatic land use changes than others



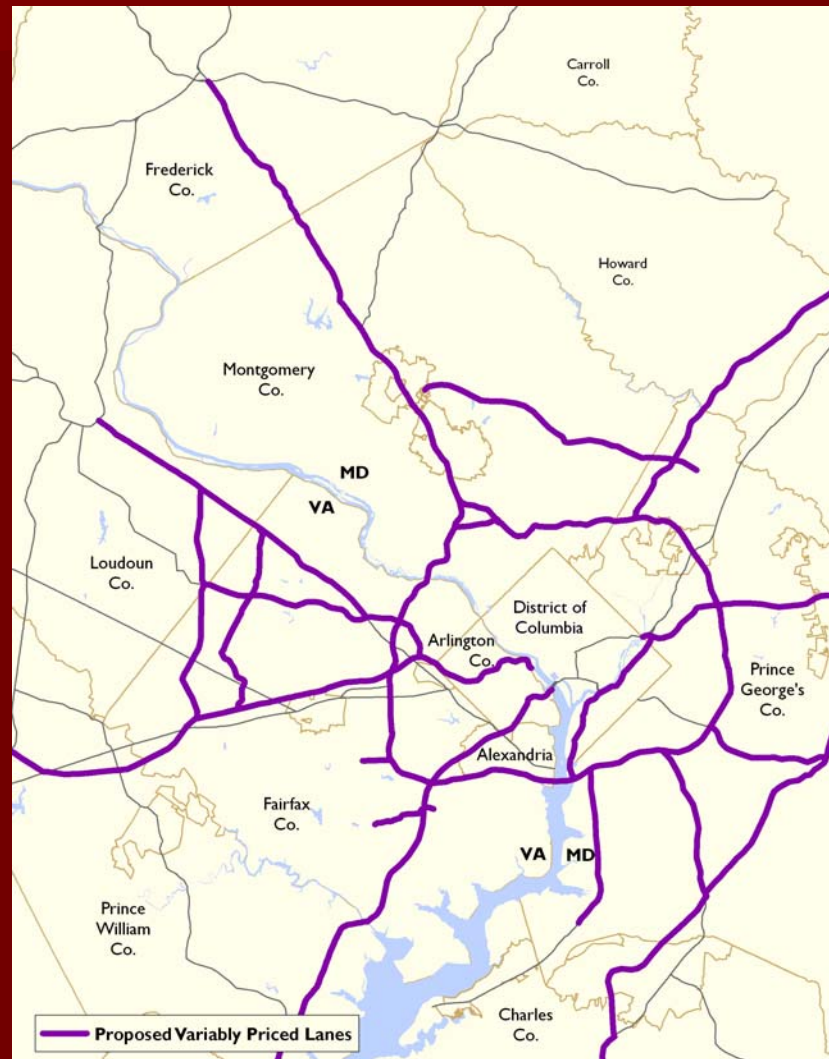
## ***Key Findings: What do the scenarios tell us?***

- Increasing household growth and concentrating that growth in regional activity centers would
  - ↑ increase transit use, walking and biking
  - ↓ decrease driving and congestion
- Encouraging more development on the eastern side of the region would improve regional travel conditions

# Next Steps:

***What if*** the region built a network of variably priced lanes?

*Results expected by June 30, 2006*



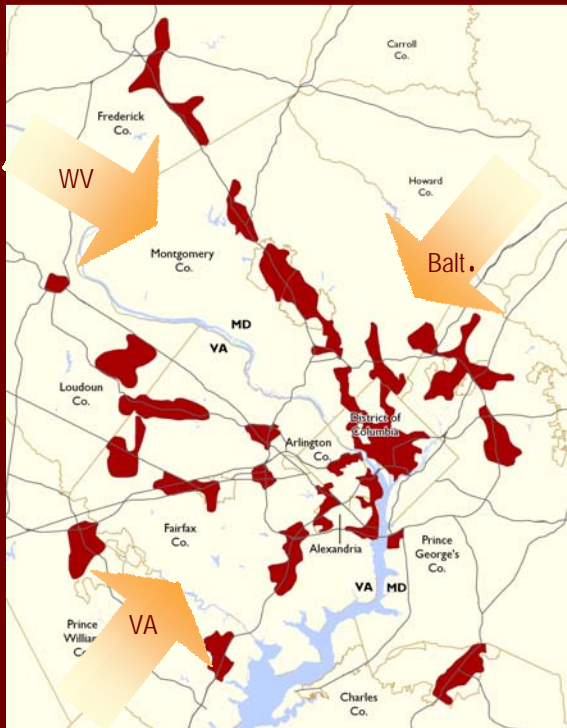


# Next Steps:

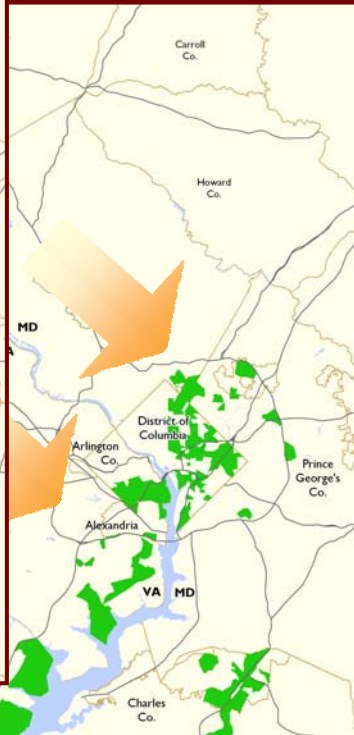
**What if** multiple scenarios were combined?

*For example . . .*

More Households



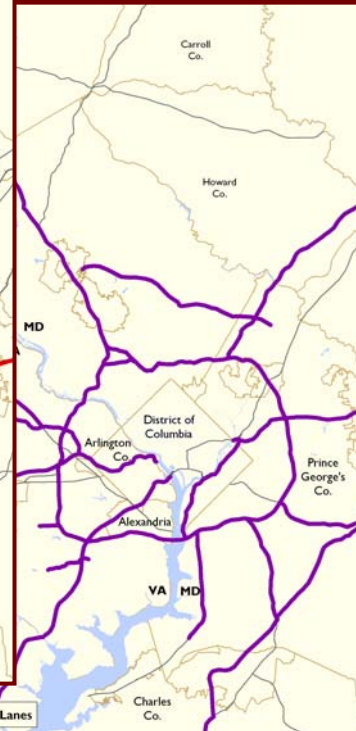
Region Undivided



New Transit



Variably Priced Lanes



*Results expected in 2007*

# Next Steps:

How to apply lessons from the scenarios in a real-world environment?

- Scenarios were intended to “push the envelope” of what’s possible, but what’s realistic?
- What changes could be made
  - To the region’s transportation plans?
  - To local land use plans?
- What changes would have the highest pay-offs?

# From “What If” to “How To”

## *How to integrate the successful strategies into the Plan*

- Recognize Questions Regarding Implementation:
  - Local traffic and neighborhood Impacts
  - Funding Needs
- Conduct Extensive Public Outreach
  - Inform Citizens Throughout the Region
  - Spur Discussion of the Issues
- Introduce New Planning Assistance Program for Localities...

# New Transportation/Land Use Connection (TLC) Program

- Provide Regional Clearinghouse
  - Raise the Profile of Local Efforts by Emphasizing Regional Context
  - Document and Share Effective Experiences Nationally and Throughout the Region
- Provide Focused Technical Assistance in Response to Requests from Localities
- Initial Funding for Pilot Program in FY 2007
  - \$250K from TPB Work Program
- If Successful, Pursue Additional Funding and Activities in FY 2008 and Beyond



# Thinking Regionally, Acting Locally

