

Tyson's Corner Land Use Study

Transportation Advanced Networks

presented to

Tyson's Corner Study Land Use Task Force

presented by

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Cambridge Systematics, Inc.**

November 26, 2007

Transportation leadership you can trust.

Tyson's Corner Introduction

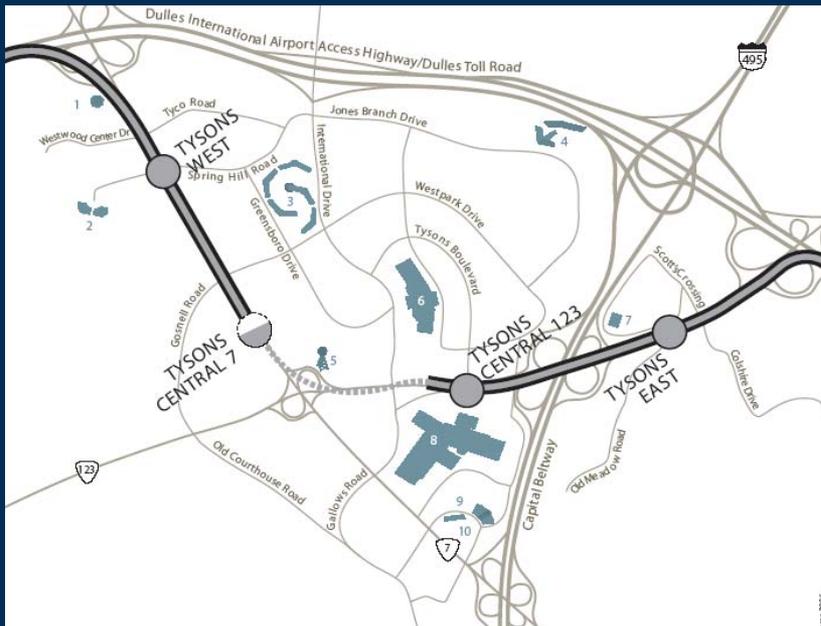
- **Tyson's Today**
- **Tyson's Tomorrow**
- **The Networks**
- **The Analysis**
- **The Evaluation**

Tyson's Today

- **Congestion... yet highly accessible**
- **Hard to get through**
- **Limited access points**
- **Traffic concentrated on a few roads**
- **Low transit usage today**
- **Not pedestrian friendly**

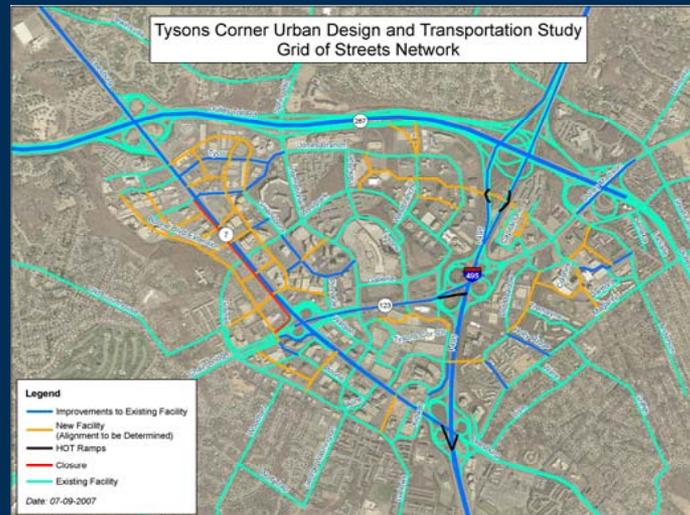
Tyson's Corner Tomorrow - 2015

- Metrorail Extension
- HOT Lanes



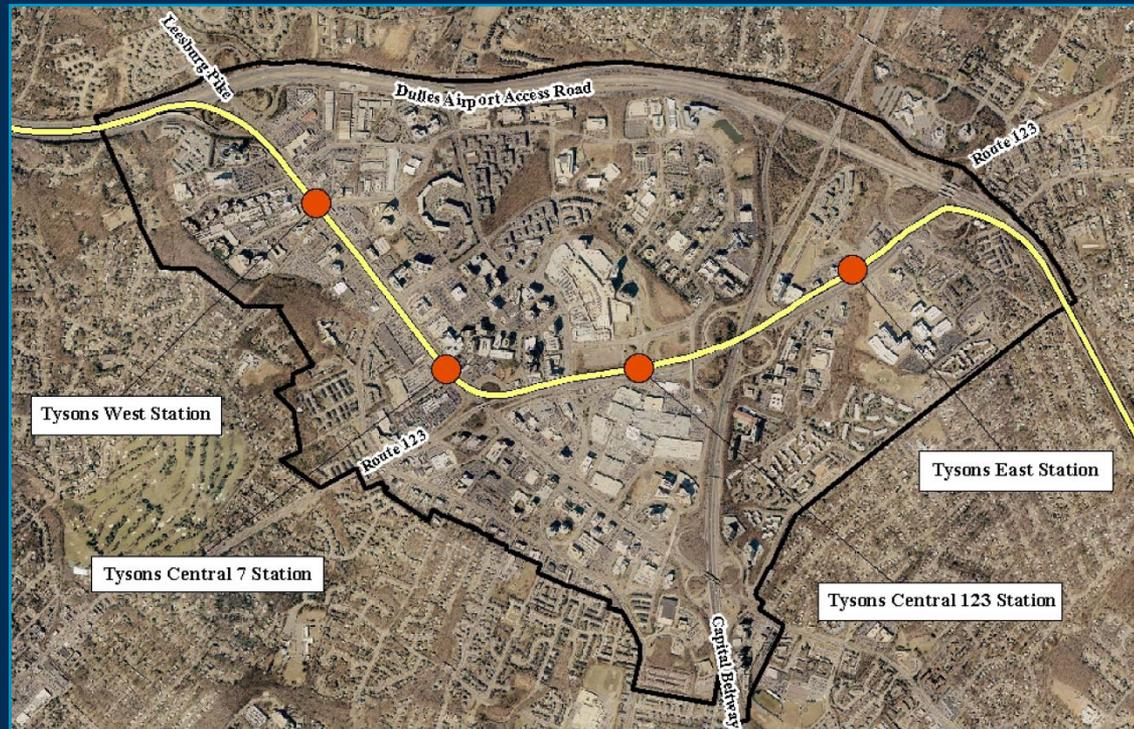
Tysons Corner Tomorrow – Beyond 2015

- Transit stations will provide focal point for additional development
- Initial analysis shows additional local roads and mixing uses provides benefits



Transportation Analysis Task Force Guiding Principles

- “Reduce the suburban focus on...surface parking and moving vehicles through Tysons Corner...”
- “Reduce the time, cost and inconvenience of accessing and moving within Tysons Corner...”

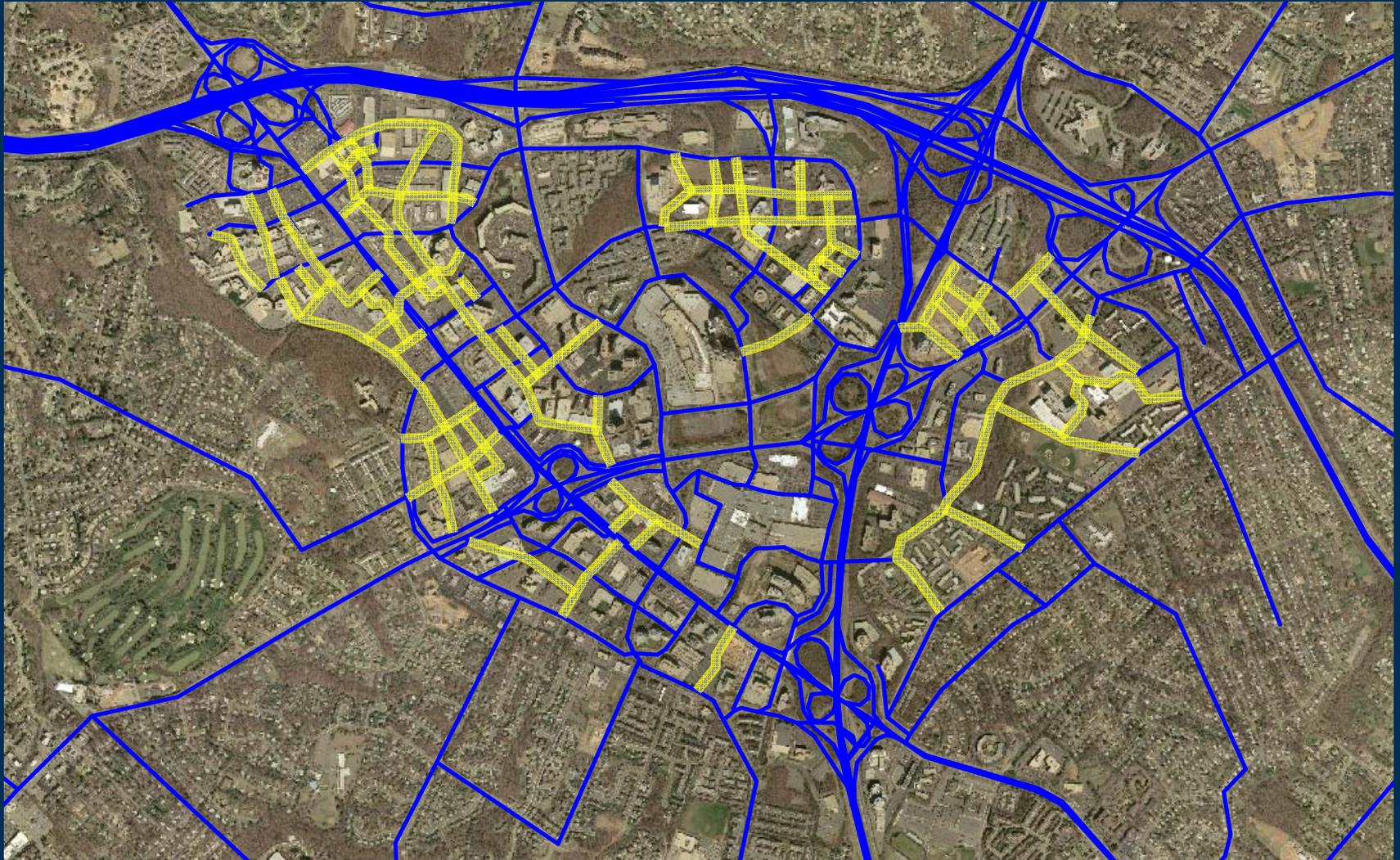


Transportation Analysis

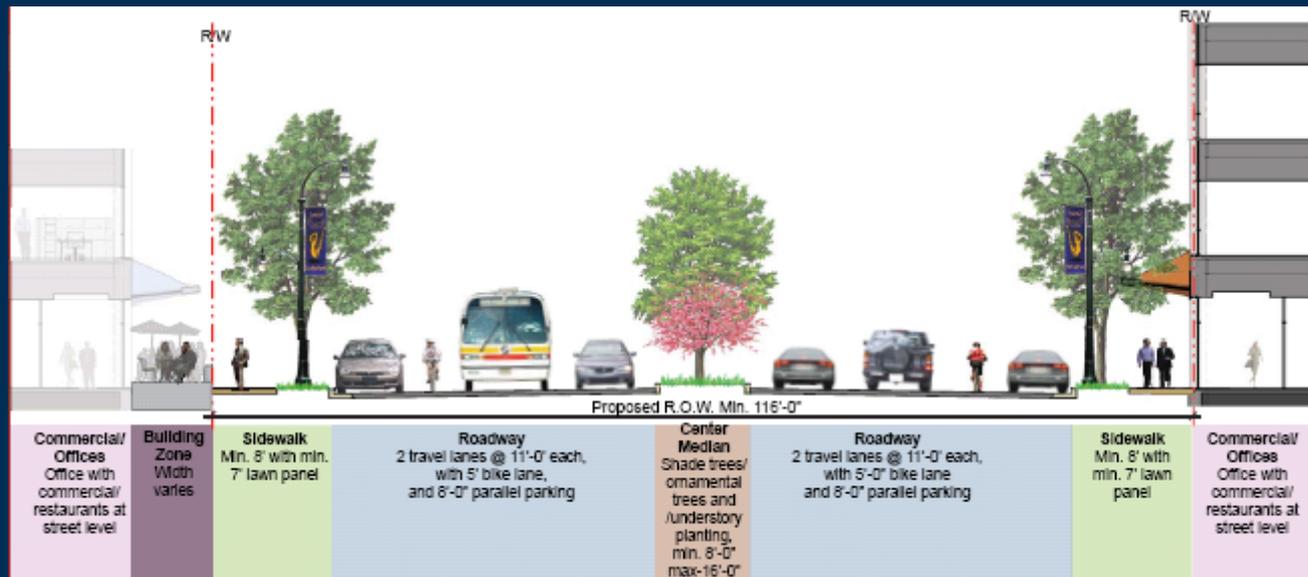
Some Specific Objectives

- **Reduce Concentration Of Traffic On A Few Streets**
- **Improve Non-motorized Environment**
- **Improve Connections Across Barriers Within Tysons**
- **Extend Reach Of Metrorail and Create Additional Internal Linkages By Transit**
- **Develop and Institute Supporting Policies And Programs**
- **Protect Surrounding Communities**

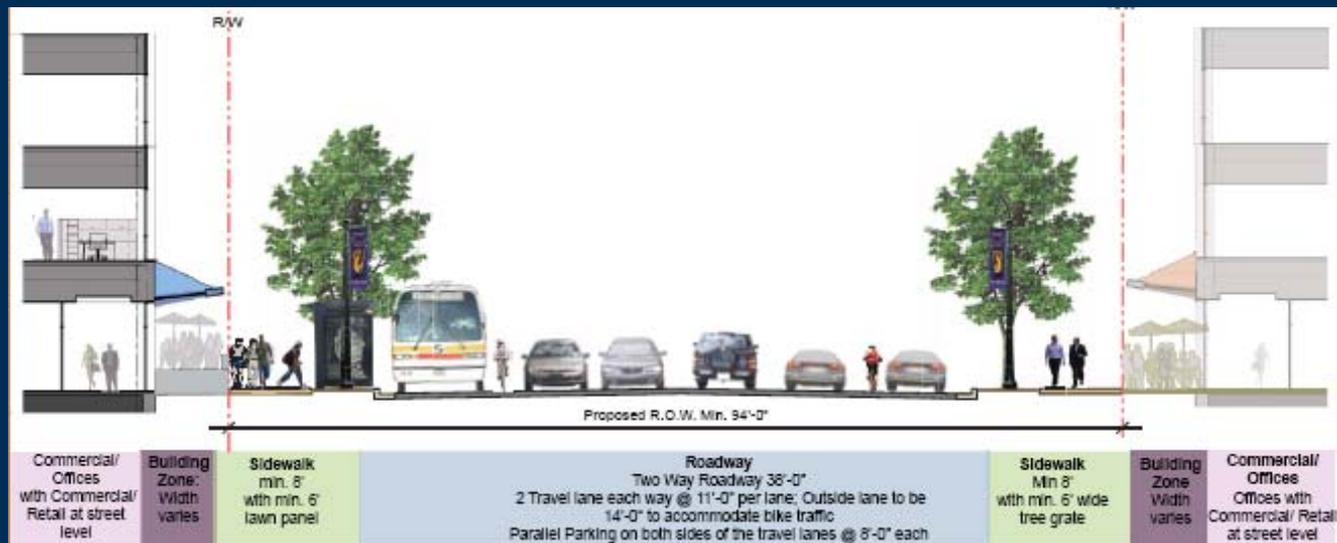
Reduce Concentration of Traffic on a Few Streets



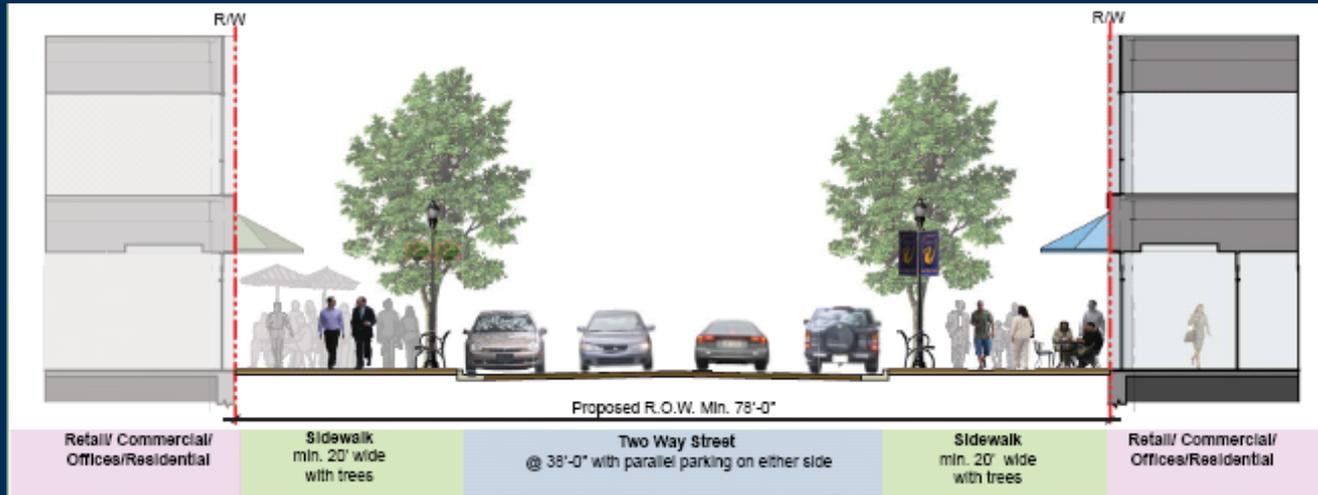
Improve Non-Motorized Environment Complete Streets - Minor Arterial



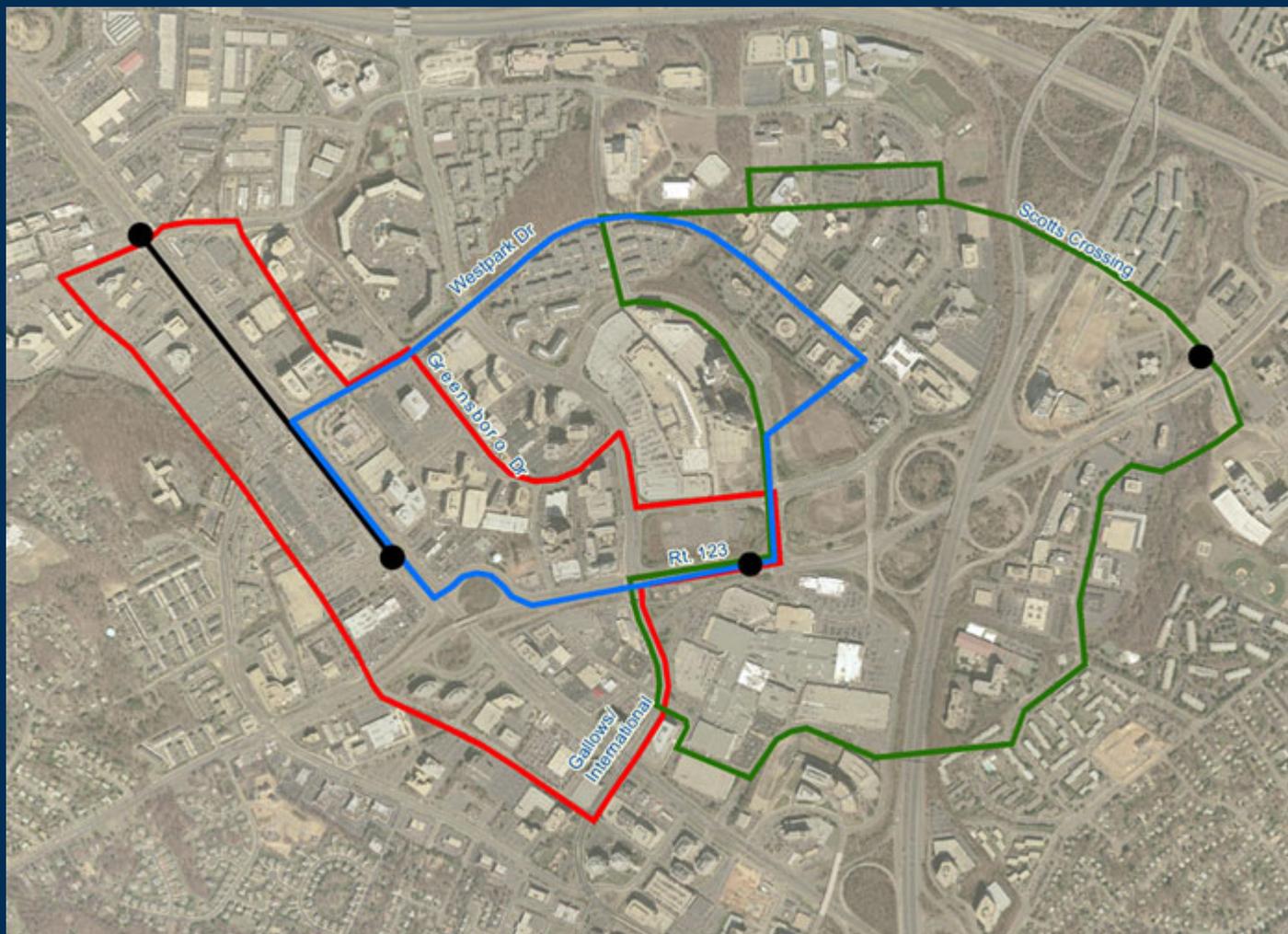
Improve Non-Motorized Environment Complete Streets - Collector Street



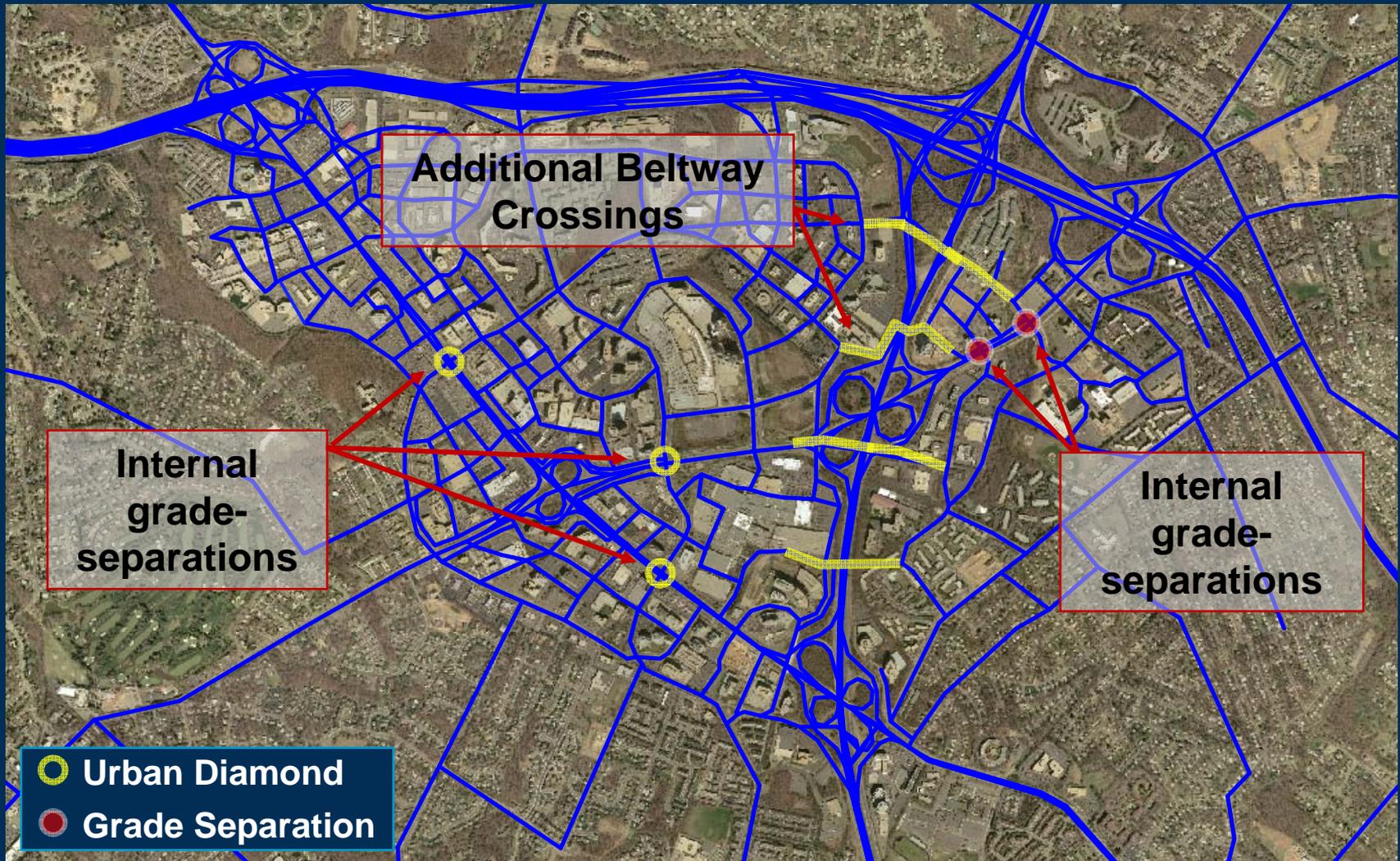
Improve Non-Motorized Environment Complete Streets - Local Street



Extend Reach of Metrorail and Create Additional Internal Linkages by Transit



Improve Connections Across Barriers within Tysons



Improve Connections Across Barriers within Tysons (bus routes)



(DRAFT CONCEPT)

Develop and institute supporting policies and programs

- **Expansion of Transportation Demand Management Program**
 - **Mandatory for **new** development**
 - **Transit coordinators**
 - **Carpool/Vanpool incentives**
 - **Transit subsidy**
 - **Flex-work arrangements**
 - **Guaranteed Ride Home**
 - **Parking management, especially near Metrorail Stations**

Protect Surrounding Communities

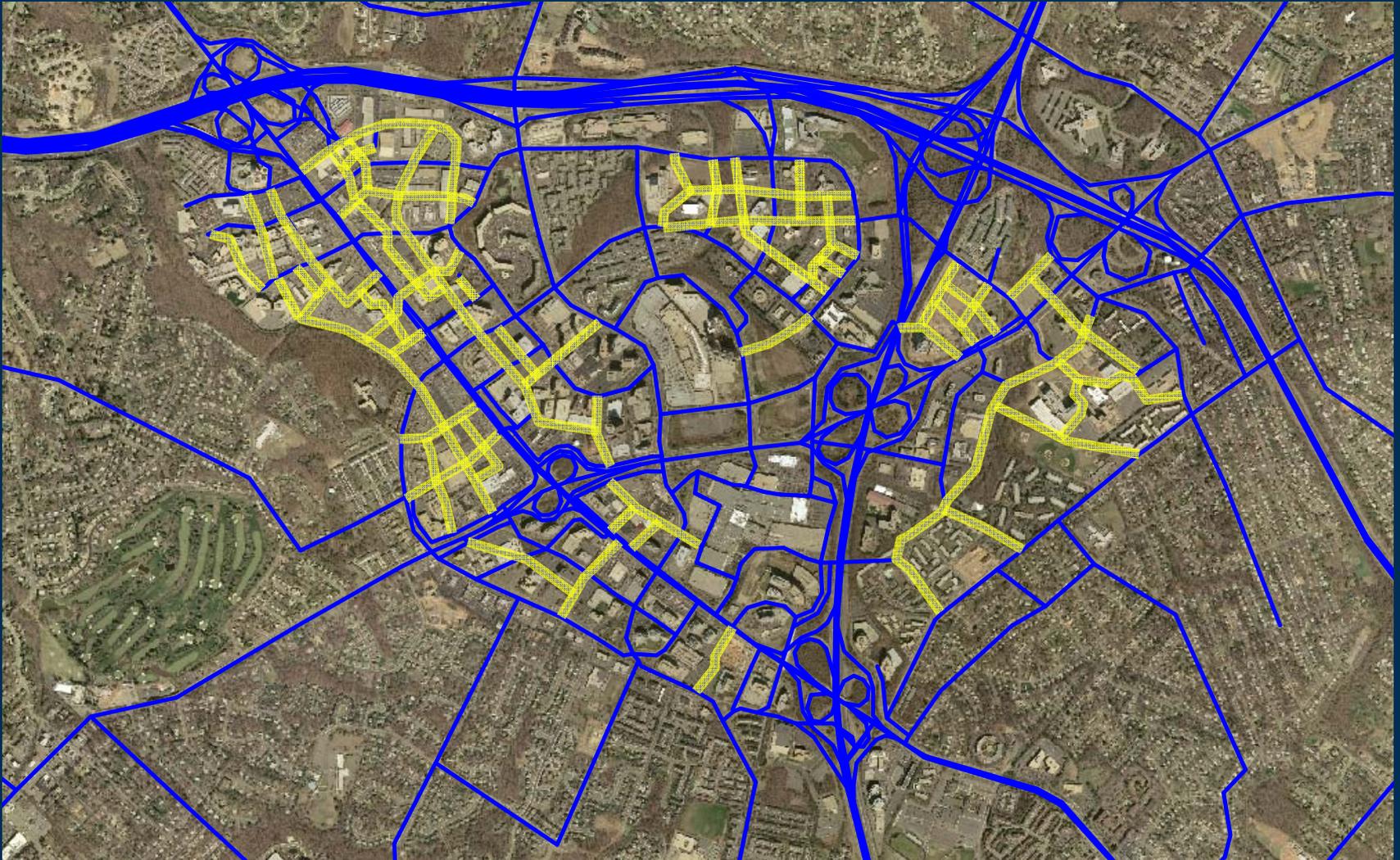
- **Traffic Operations**
 - Limit “cut through” traffic
 - Manage parking
- **Land Use Policies**
 - Lower densities near surrounding communities



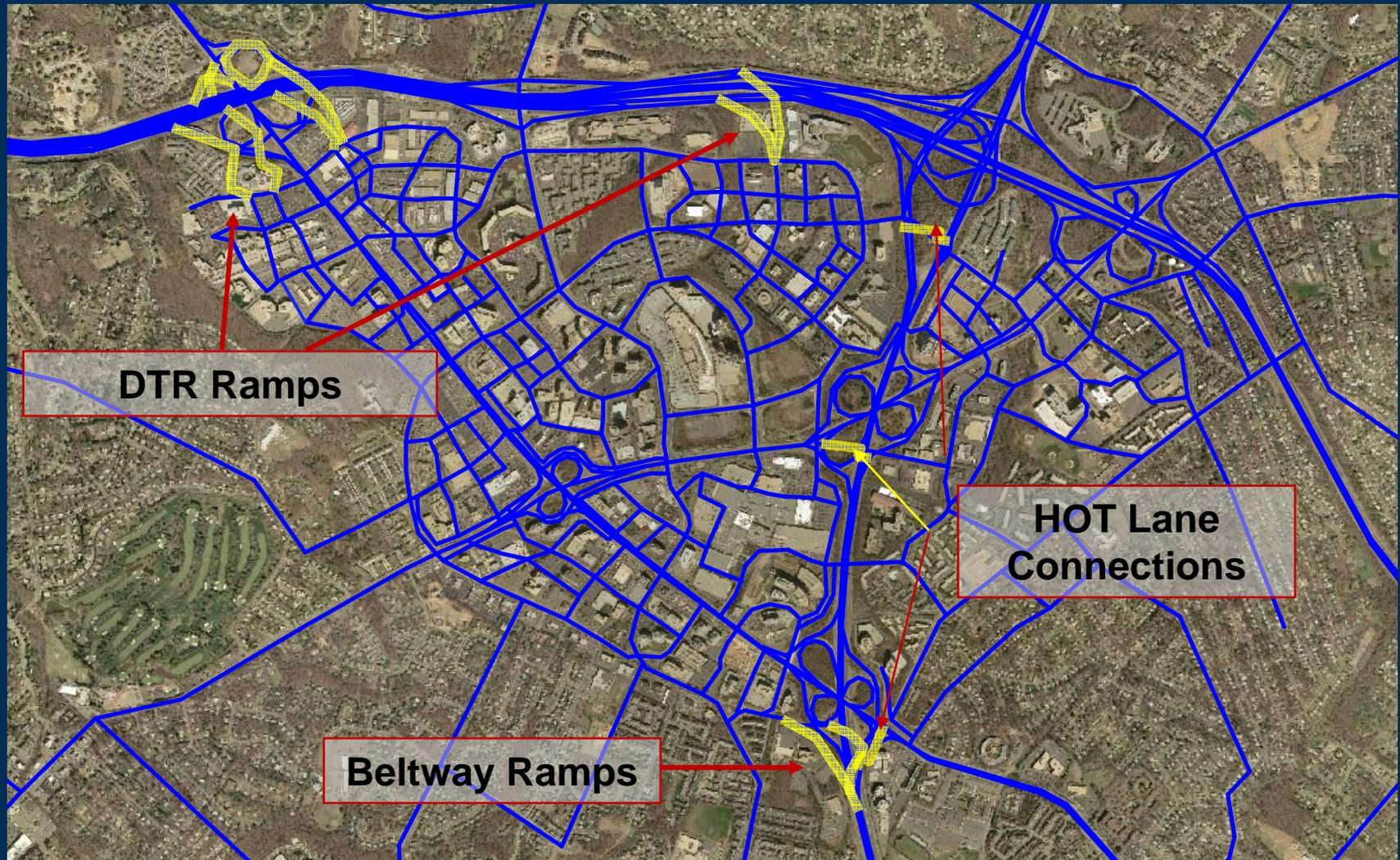
Transportation Analysis

- **Preliminary Analysis Completed and Presented in July Workshops**
- **Advanced Transportation Network Analysis to Begin in December**
 - **Metrorail Extension and Grid of Streets included**
 - **Network 1: More focused on new roadway connections**
 - **Network 2: More focused on transit and non-motorized travel**

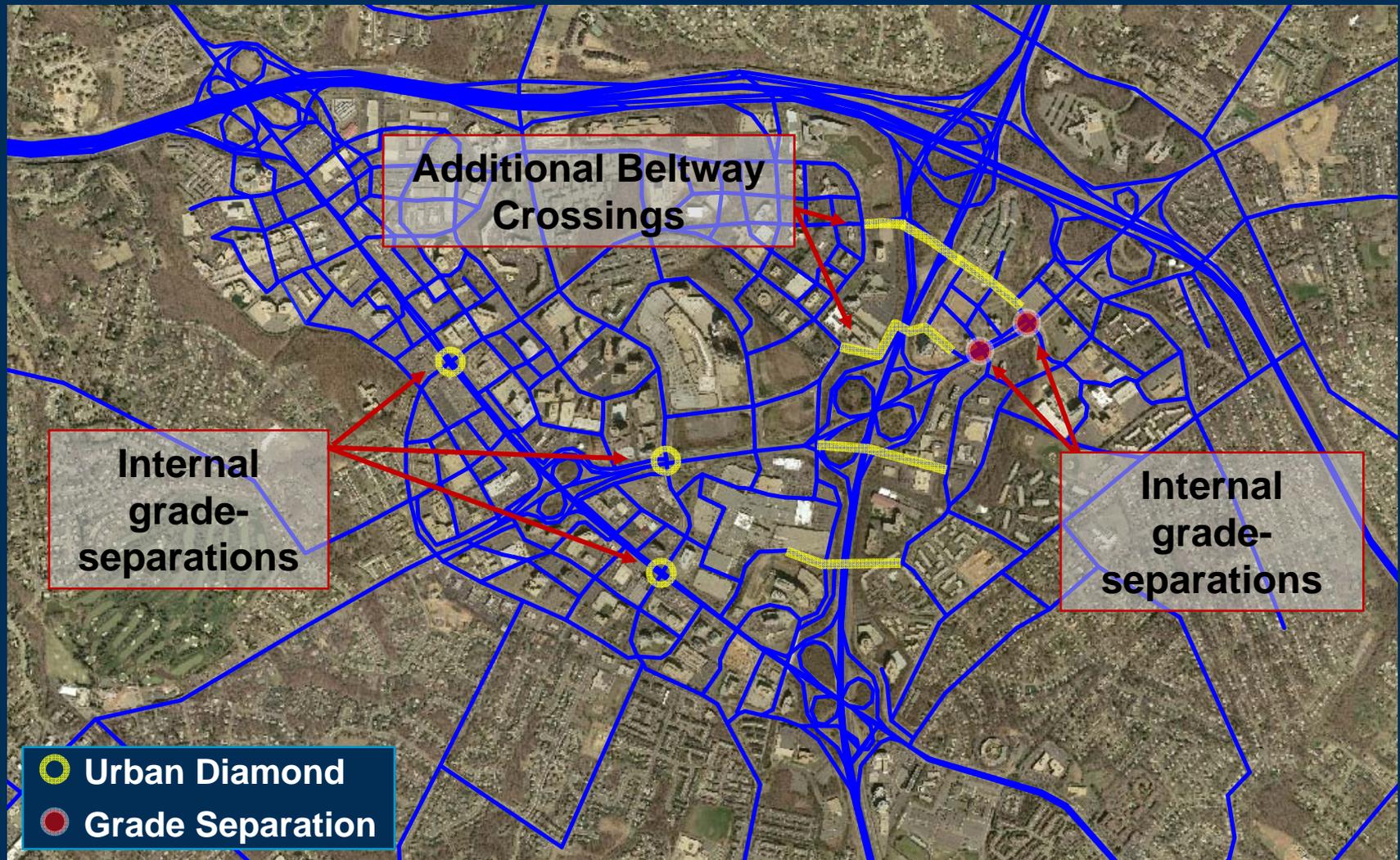
Network 1 Grid of Streets



Network 1 - Ramps



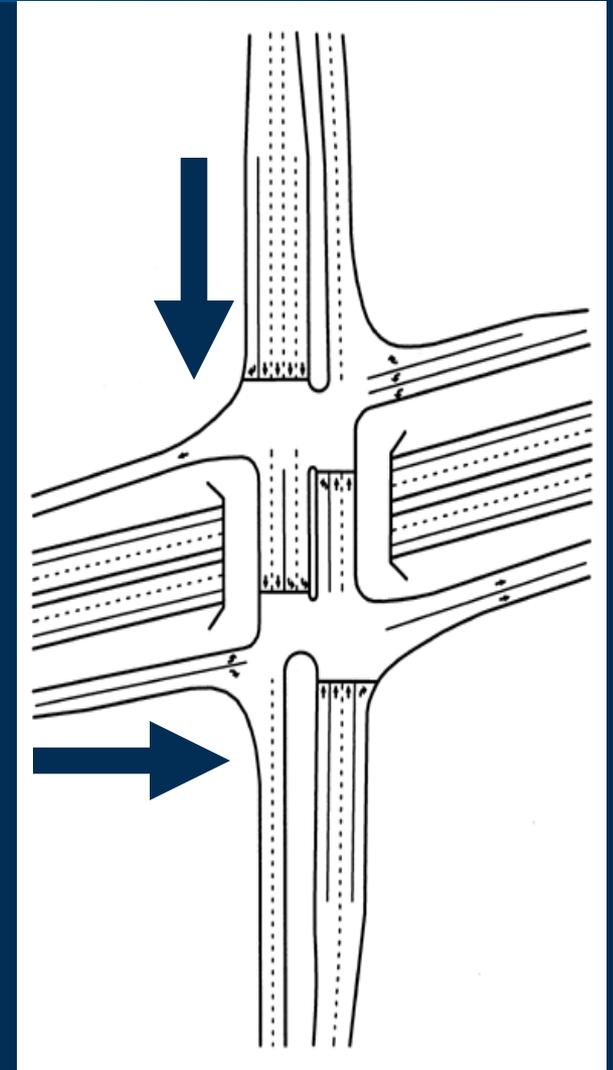
Network 1 Crossings/Grade Separations



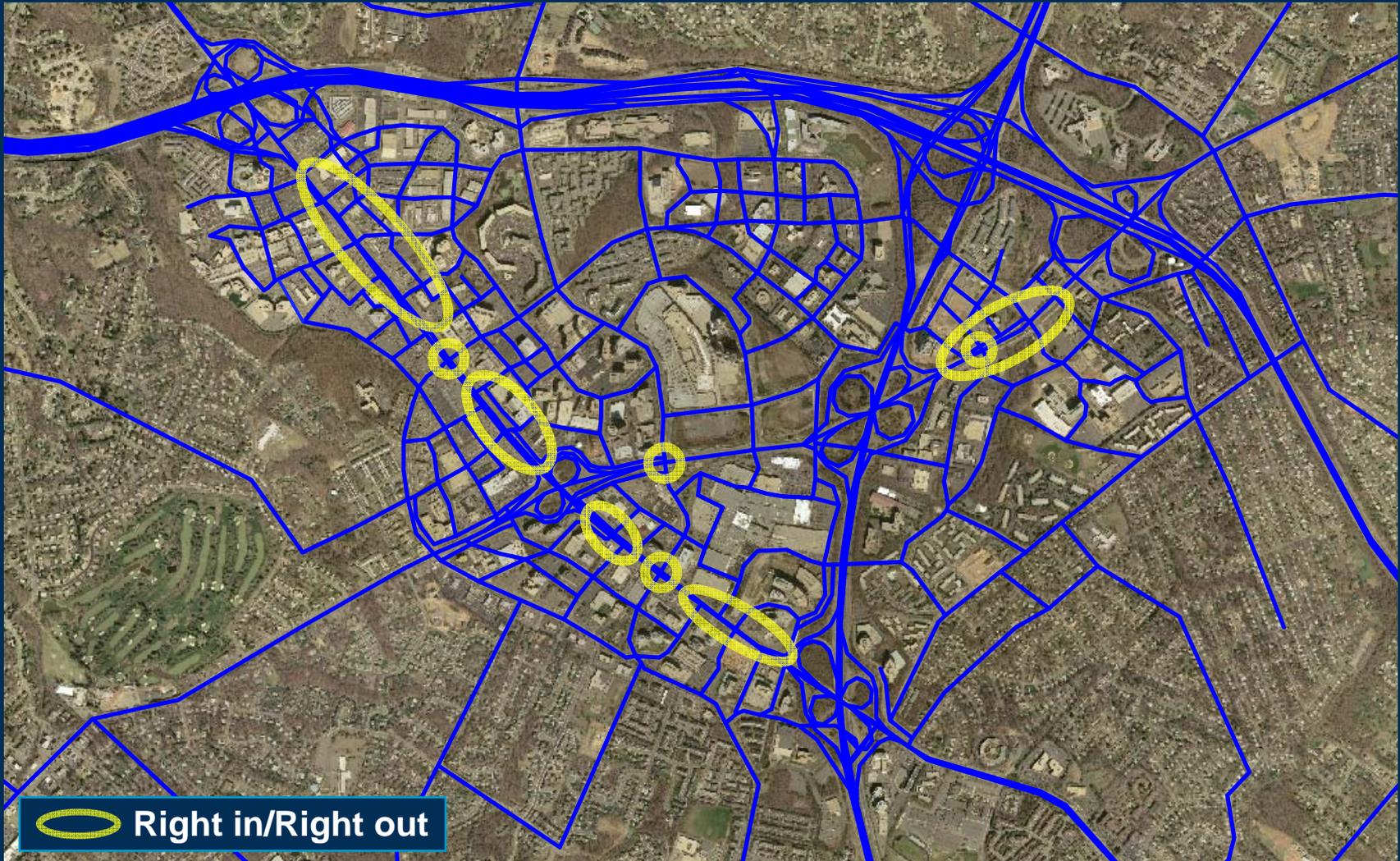
Network 1

Urban Intersection Improvements

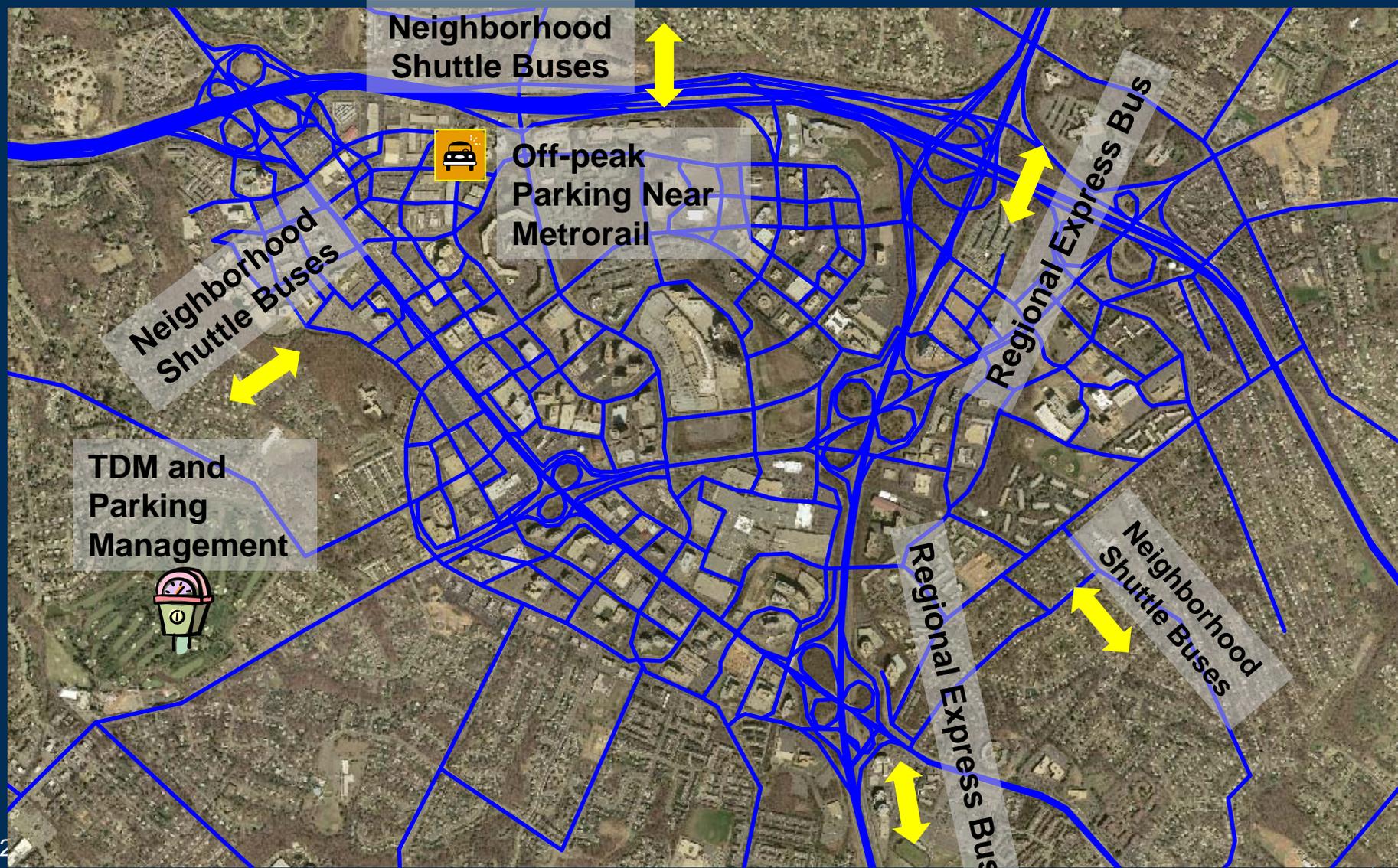
- Reduces traffic conflicts
- Can facilitate pedestrian crossings



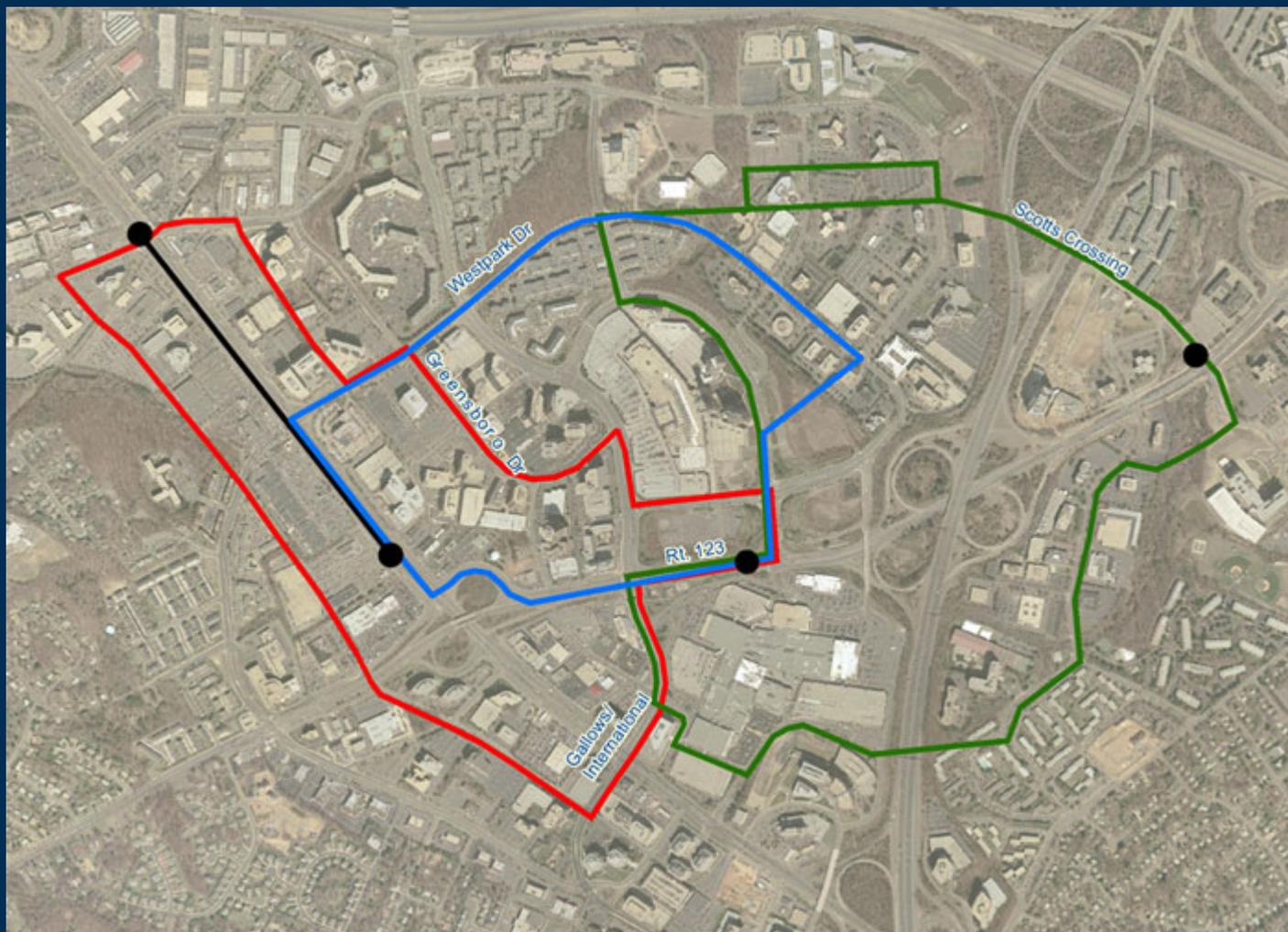
Network 1 - Intersection Operations



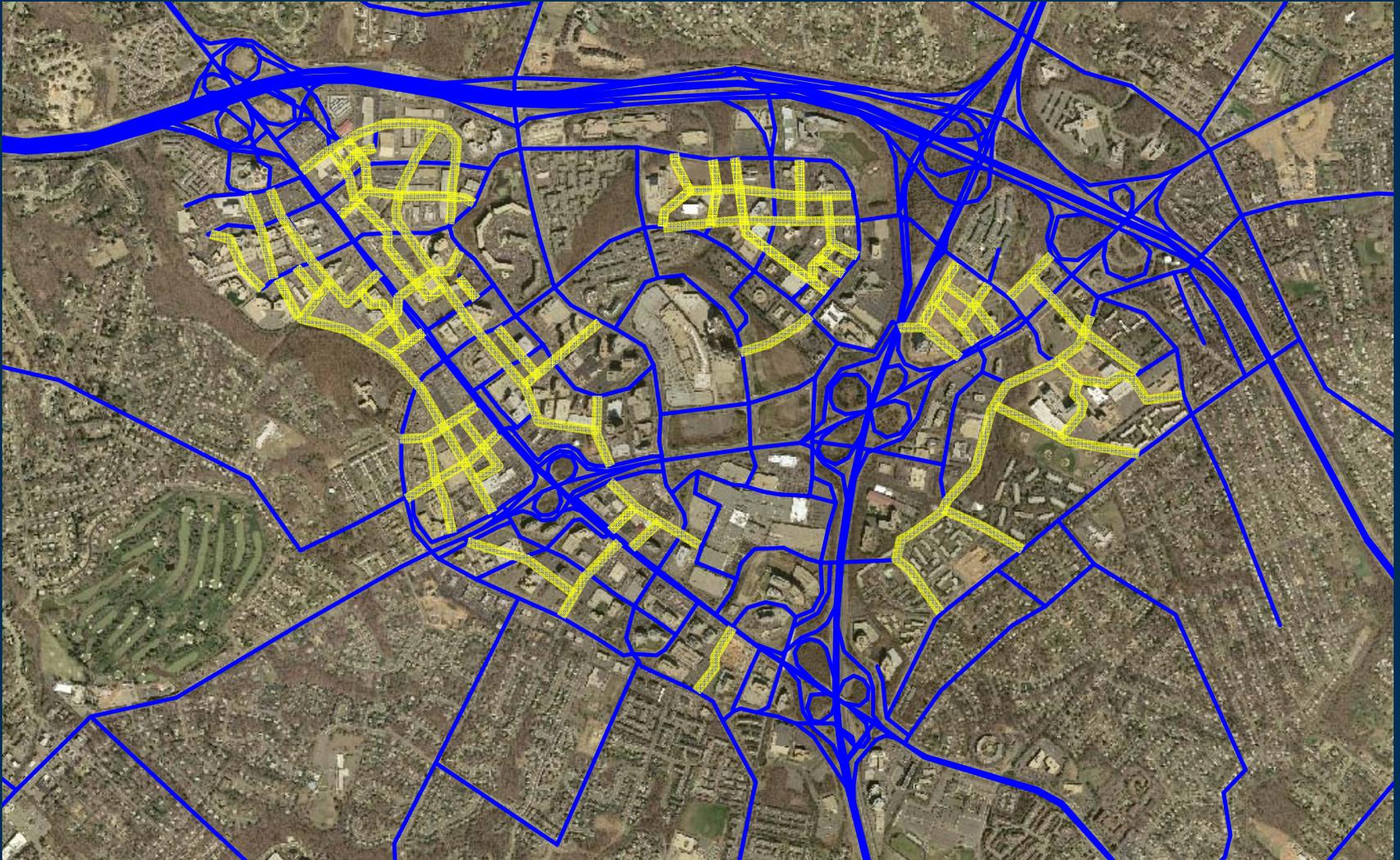
Network 1- Transit



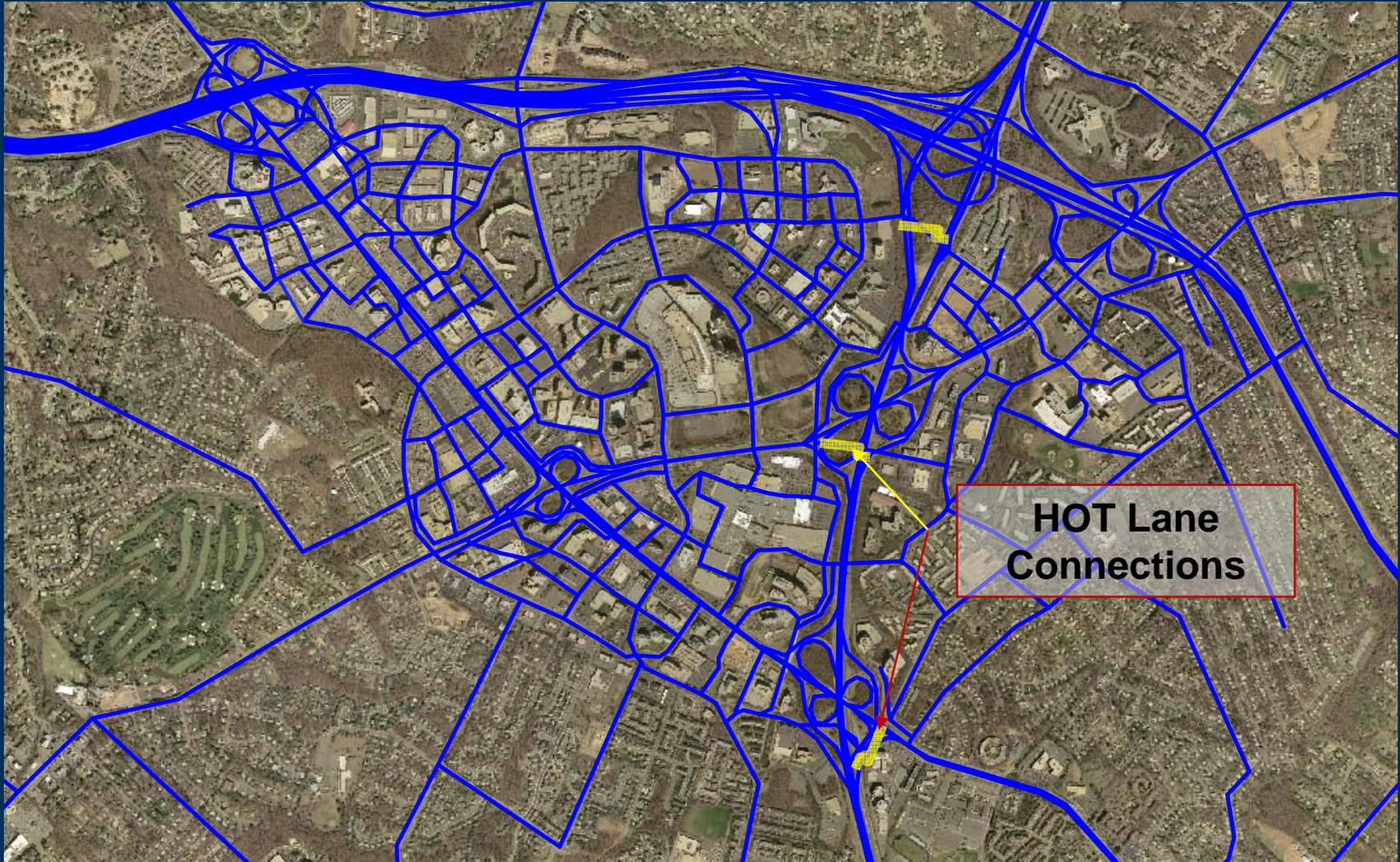
Network 1- Transit (Moderate Capacity Circulators)



Network 2 - Grid of Streets

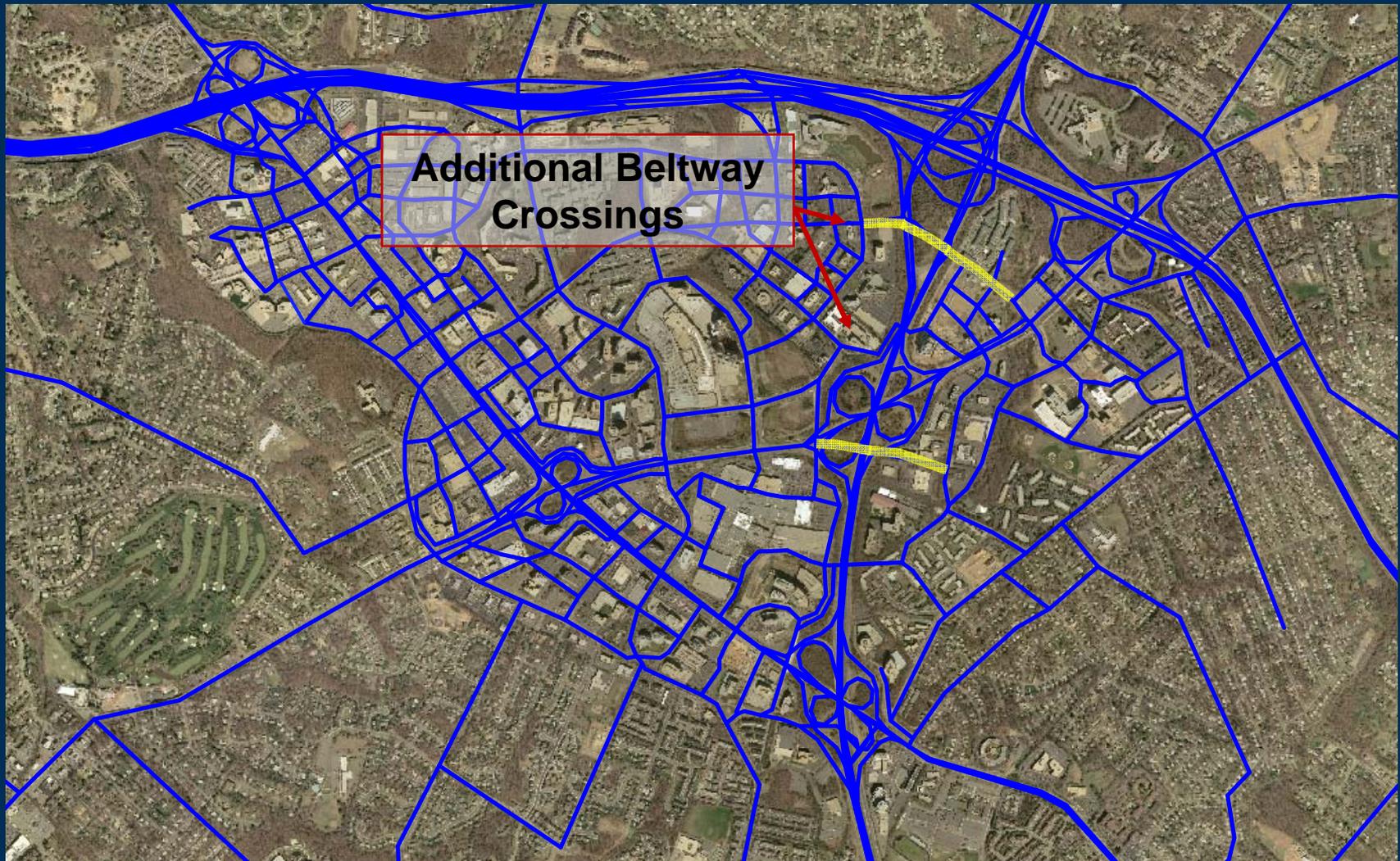


Network 2 - Ramps

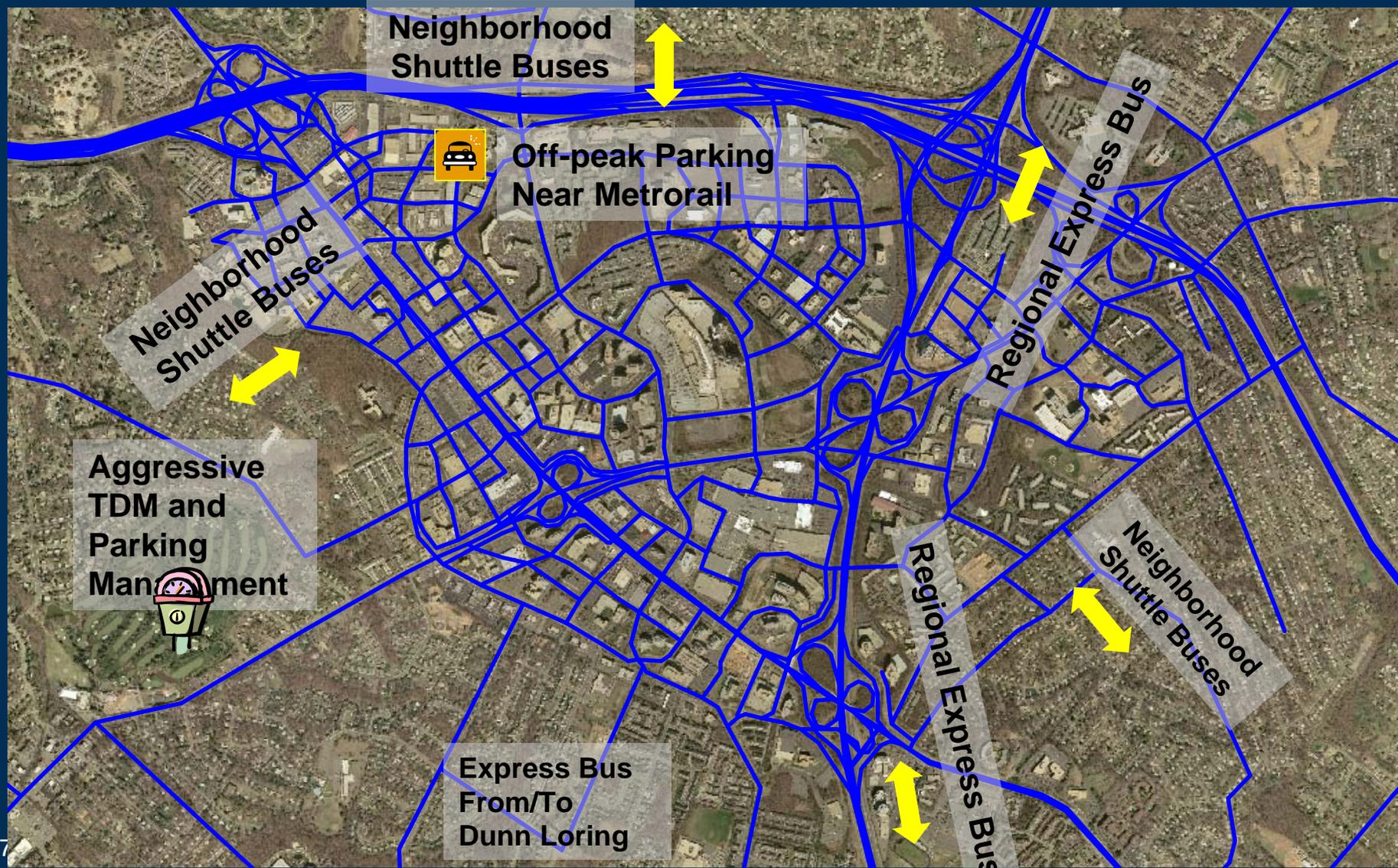


**HOT Lane
Connections**

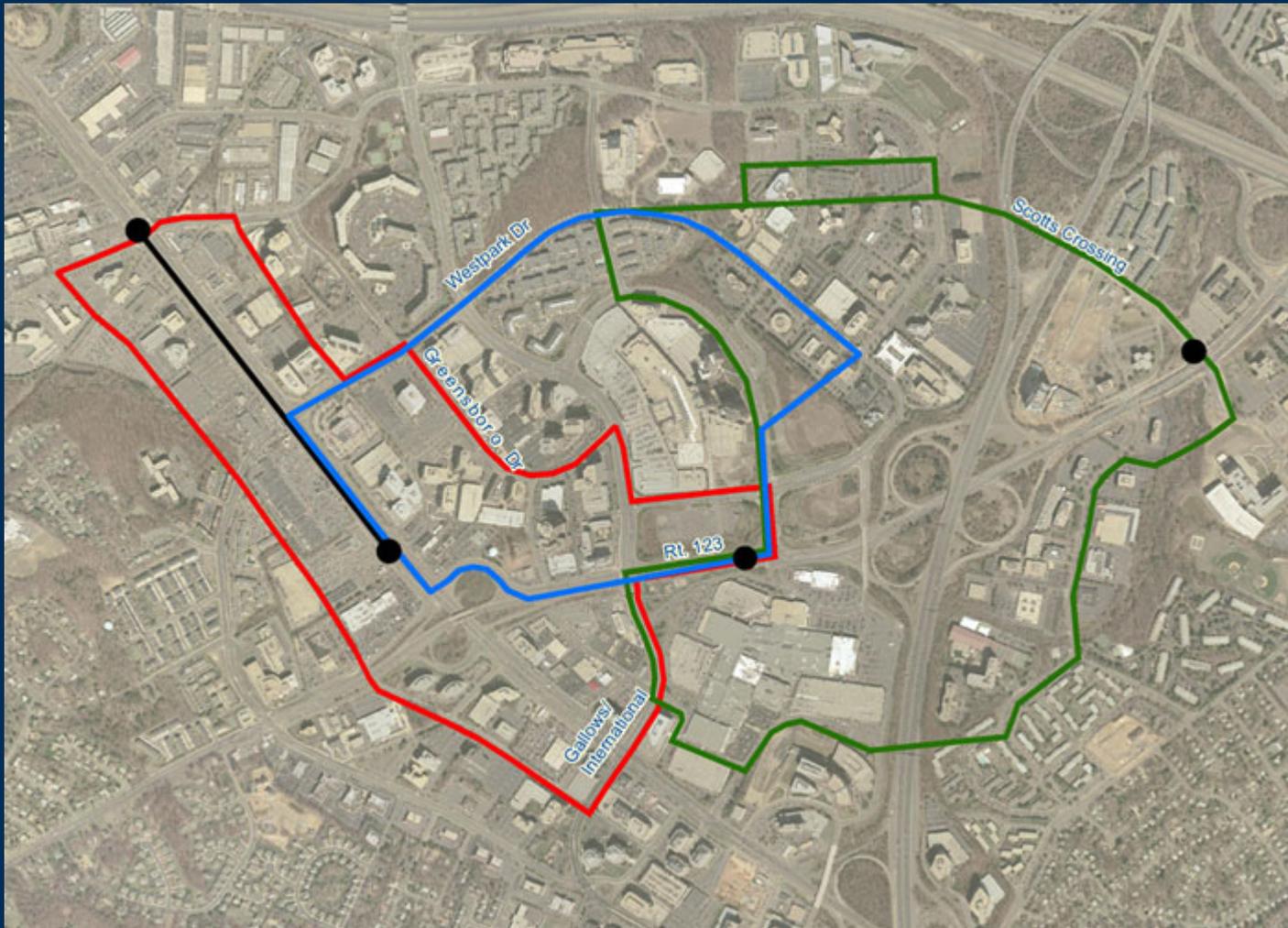
Network 2 - Crossings



Network 2 - Transit



Network 2 – Transit (High Capacity Circulators)



Advanced Networks – Summary

	Network 1	Network 2
Metrorail extension and HOT Lanes		
Urban intersection improvements and traffic management		
Additional Ramps to Beltway and Dulles Toll Road		
Circulator on own lane/right-of-way		
Emphasis on non-motorized travel and “complete streets”		
More Aggressive TDM and Parking Management		
Operational elements to prevent cut through traffic		

How are we evaluating this (the questions)?

- Is there a balance?
- What are the benefits?
- What are the costs?

How are we evaluating this?

- **We are using several transportation models to produce forecasts**
- **We can't predict many contributing factors**
- **We can't quantify everything**
- **...But we try to create a consistent evaluation framework**

How are we evaluating this? - Measures

- **How congested will Tysons be?**
 - Level of Service
 - Travel Times and Delay
- **How many people are driving, taking transit, walking/biking?**
- **How accessible is Tysons?**
- **How much will it cost to create Tysons?**

How are we evaluating this? (Comparison to Rosslyn-Ballston)

- Five Metrorail Stations with good bus service in two square mile area
- 42% of residents drive alone to work, 38% use transit, 8.2% carpool
- Modest increases of travel on arterial streets and local streets
- Large ridership increases on Metrorail



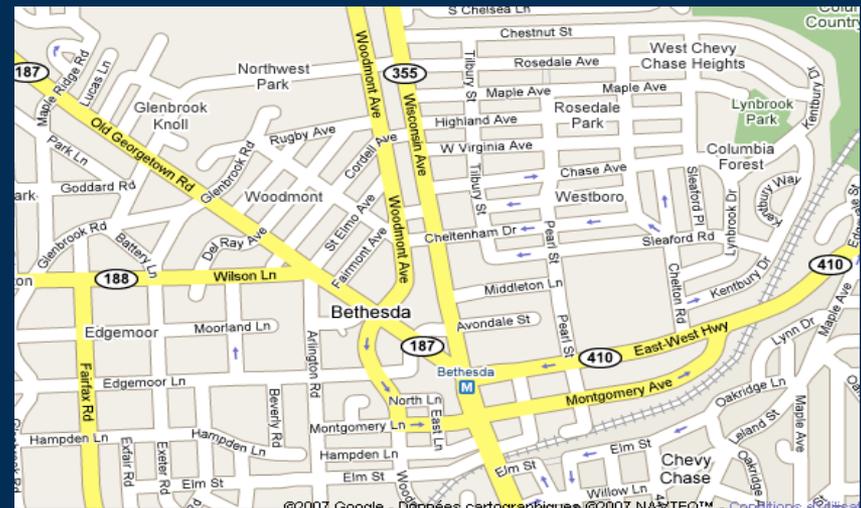
1970s



Today

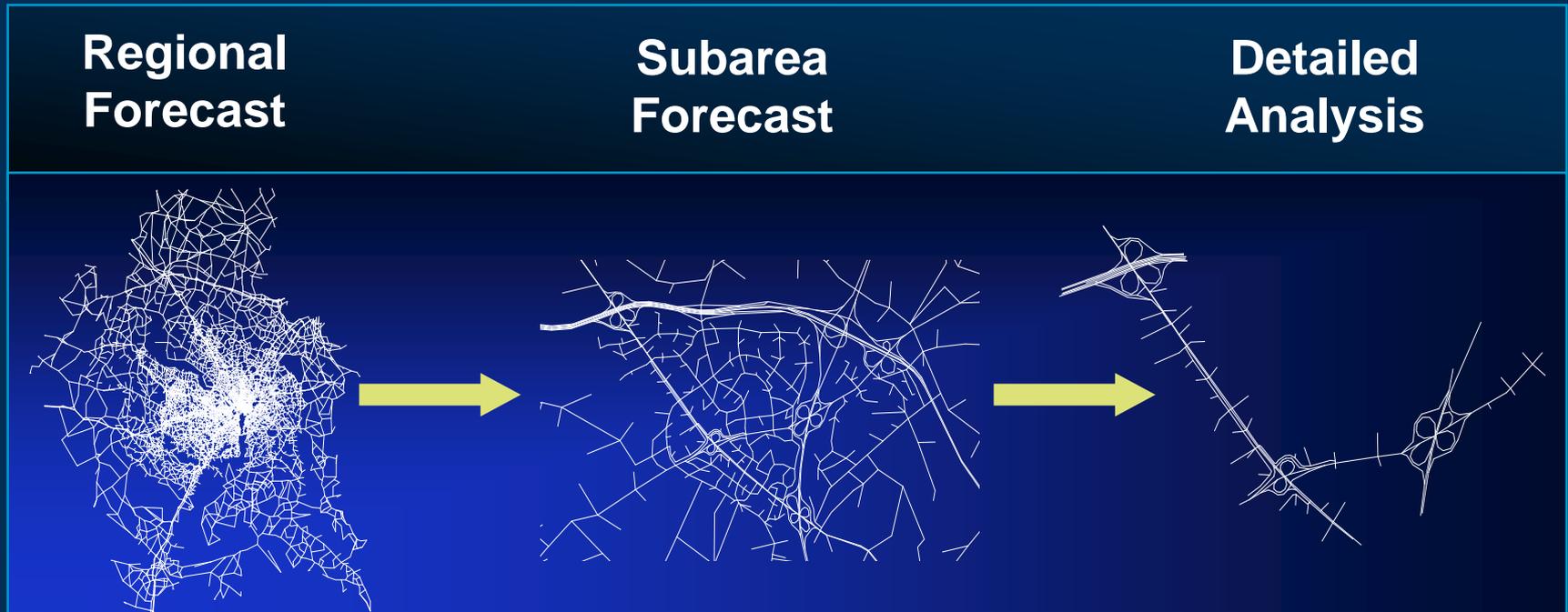
How are we evaluating this? (Comparison to Bethesda)

- Two Metrorail Stations with good bus service
- 45% of residents drive to work
- Travel distributed on grid System of Streets



Additional Transportation Analysis

Current Modeling Process



Additional Transportation Analysis Need for Post-Processing

- Predicting walk, bike, and circulator transit modes
- Analyzing impacts of micro-scale design characteristics
- Estimating impacts of transportation demand management policies and programs



Thanks - Questions or Comments?