

Transforming Tysons:

Overview of the Transportation Section of the Comprehensive Plan Amendment, 3rd Draft



Presented to
Transportation Advisory Commission
February 16, 2010

Tysons Today

- Economic engine of Fairfax County
- 17,000 residents; 105,000 jobs
- Half the land covered by impervious surfaces, including 167,000 parking spaces
- Auto-oriented, single-use development pattern
- Few transit options

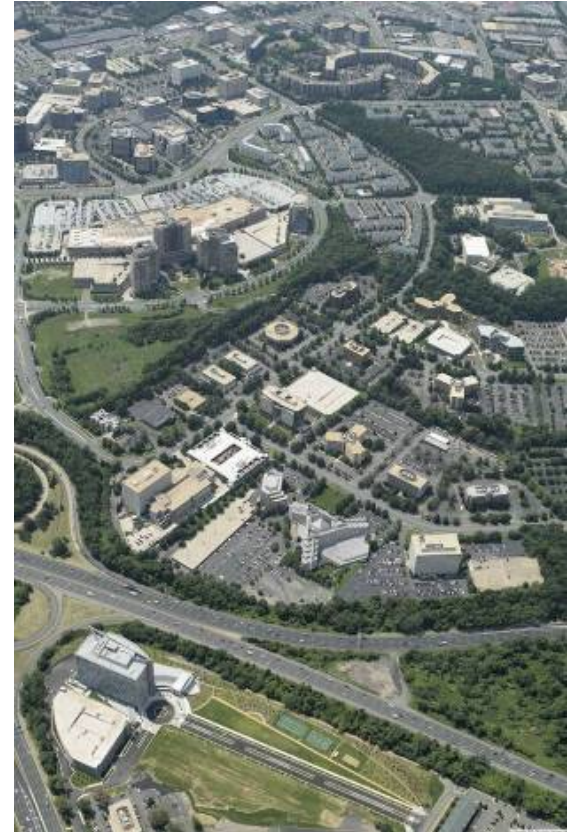


Image source: Fairfax County EDA

The Vision

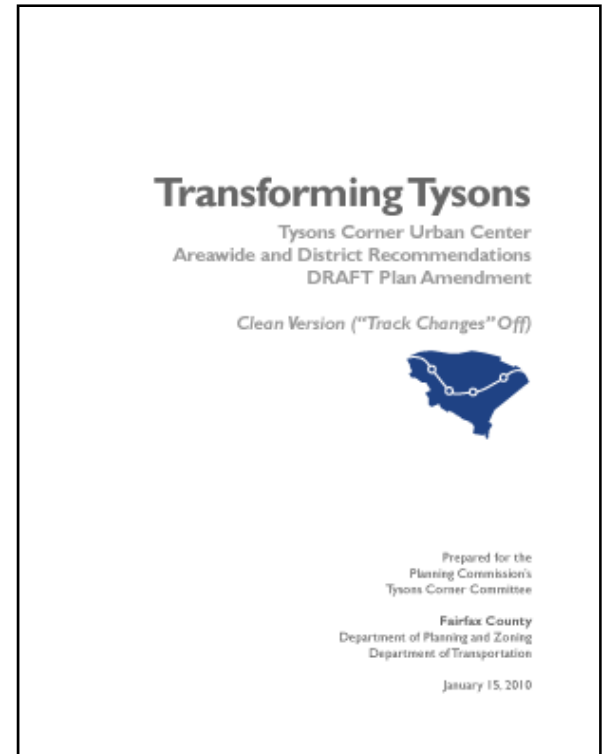
A livable urban center with:

- Transit-oriented densities
- A variety of modes for trip making
- Fewer parking spaces
- Pedestrian and bicycle friendly streets



Draft Plan Amendment

- 3rd Draft of Plan text
- Incorporates staff recommendations presented at Planning Commission Committee meetings
- Text boxes include staff alternatives, alternatives from Task Force's Draft Review Committee and background information



Main Recommendation

- If infrastructure, services and programs are phased over time to maintain a balance between land use and transportation, it is possible to support 113-116 million sq. ft. of development by 2050.
- 100,000 residents
- 190,000 jobs

Other Findings/Recommendations

- The grid network is essential to support internal mobility.
- Pedestrian demand will be high, requiring investment in good facilities.
- Single occupancy vehicles will remain the dominant mode for work trips.
- Carpooling is an important mode due to unique access to a high-quality HOV network (I-66, DTR, Beltway).
- Preliminary assessment shows the likely need for additional capacity to the DTR and the Beltway to accommodate the GMU High 2030 Land Use.
- For Tysons to maintain a competitive level of accessibility beyond a 2030 GMU High Land Use level, additional high-quality regional transit connections should be explored.
- The application of new technology to promote telework, communications with travelers, the use of transit, and bicycles, can be very beneficial.

Key Components of the Plan

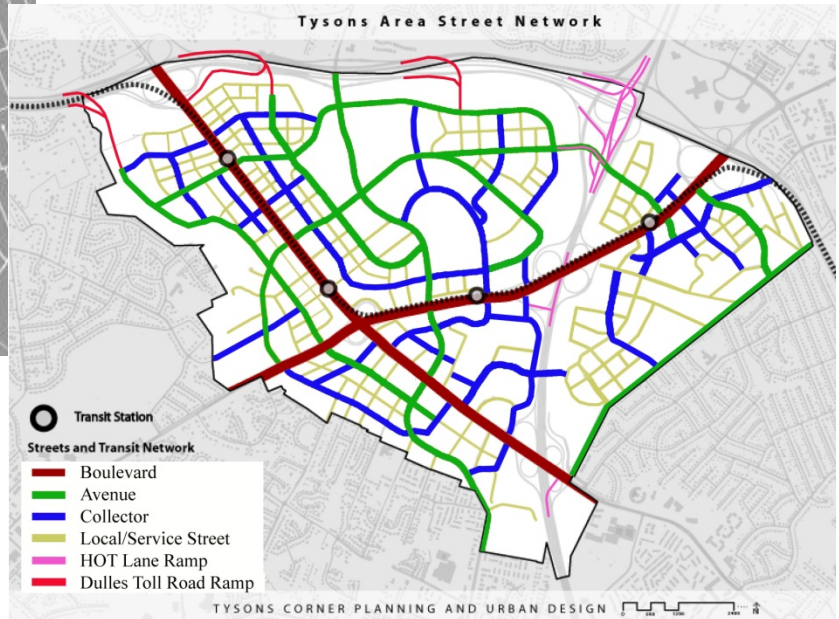
- A Grid of Complete Streets
- Transit Improvements
- An expanded Bicycle Network
- Roadway Improvements
- TDM Measures → Vehicle Trip Reductions
- Changes to Parking Requirements
- Monitoring System



Urban Street Grid



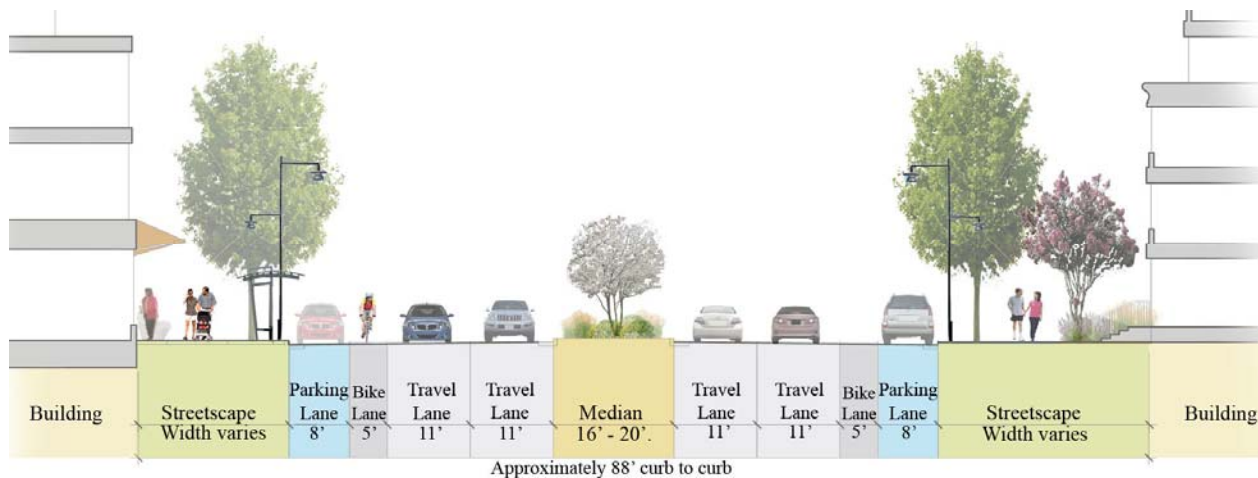
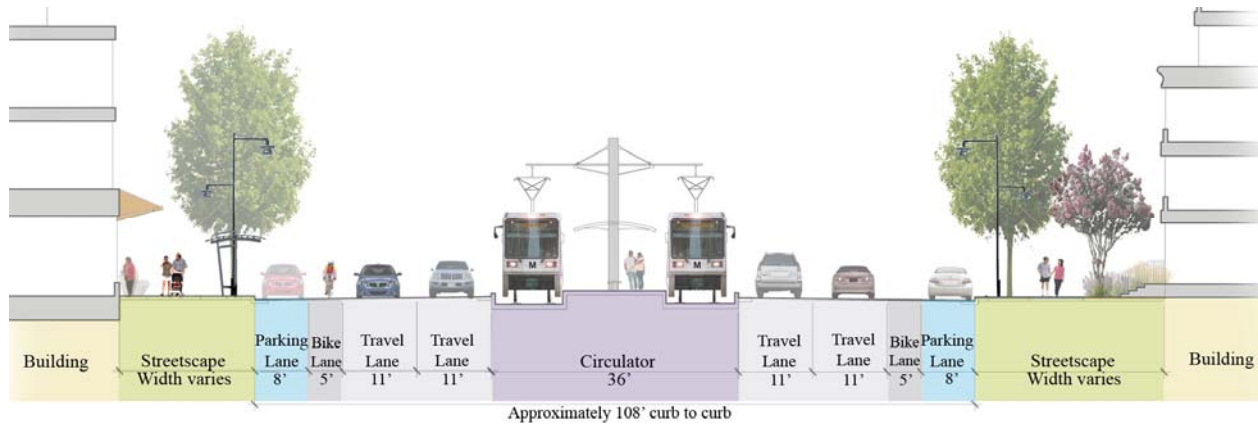
Tysons “super-blocks” today



- Potential for smaller, walkable blocks
- New ramps and Beltway crossings

Complete Streets

Facilities for pedestrians, bikes, transit vehicles, and cars



Transit Improvements

- Silver Line Extension to Dulles Airport
- Circulation System Within Tysons
- Expanded Local and Regional Bus Service
- Additional high speed transit corridors are also needed

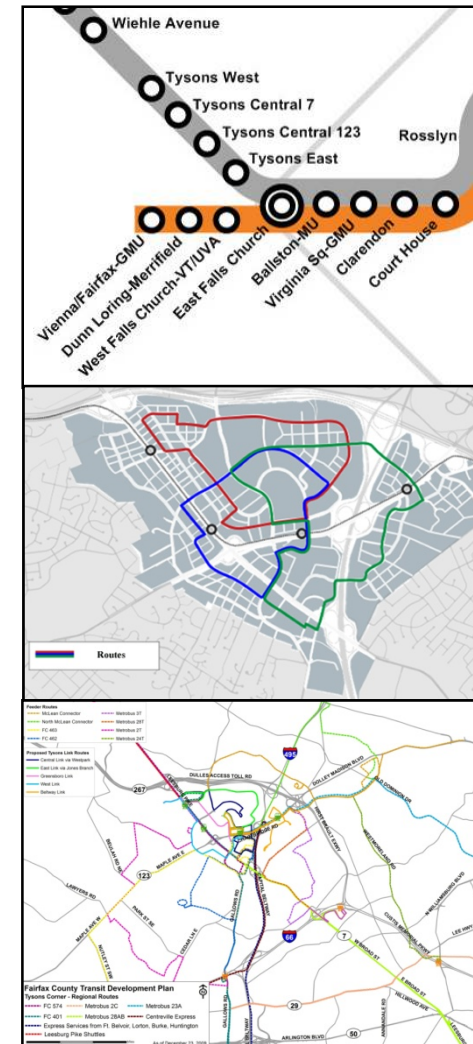
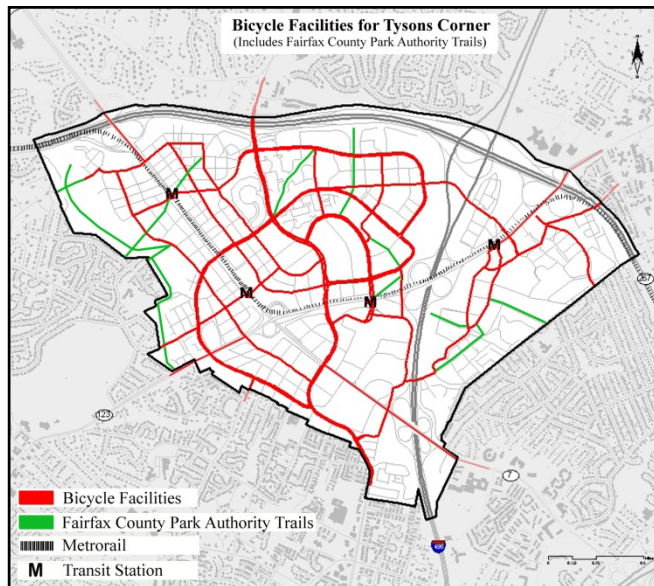


Image sources: Dulles Corridor
Metrorail Project, & FCDOT

Expanded Bicycle Network



- On-Road Bicycle Lanes
- Off-Road Multiuse Paths
- Bicycle Parking Requirements

Image sources: FCDOT

Roadway Improvements Beyond the Grid of Streets

- Dulles Toll Road Ramps
- Additional Lane on I-495, Outer Loop and DTR
- Extend Boone Blvd and Greensboro Drive
- I-495 Crossing from Jones Branch Drive to Scotts Crossing
- Widen Route 7, Route 123, Gallows Road, and Magarity Road (per current Comp Plan)

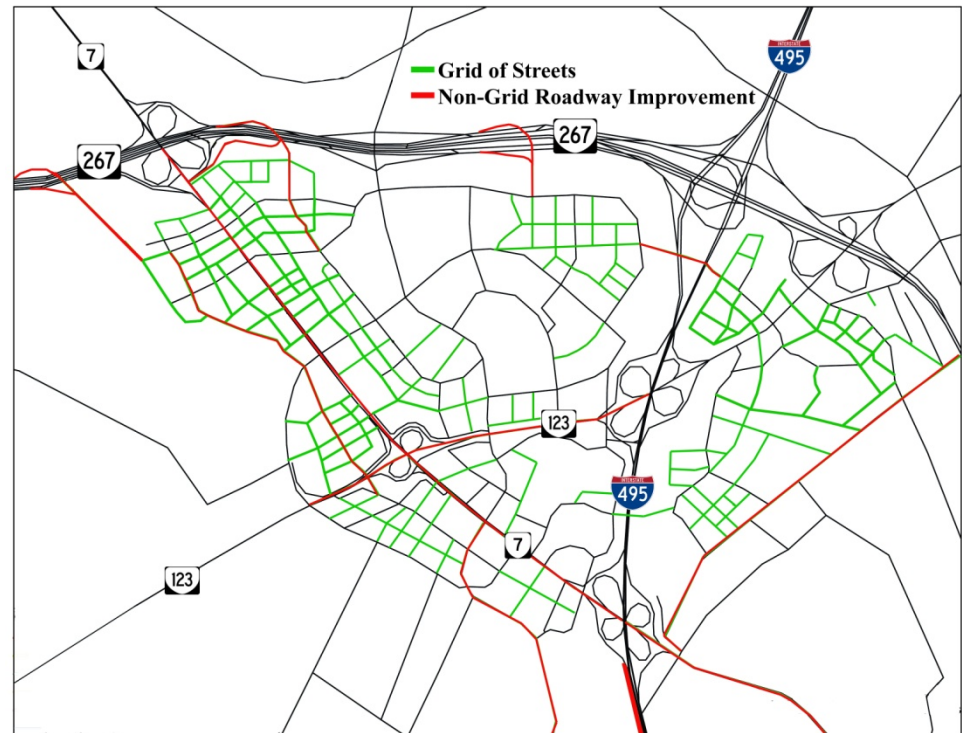


Image sources: FCDOT

TDM Goals/Measures

Development levels in total square feet (with corresponding forecast year)	TDM Vehicle Trip Reduction Goals, (Percentage Reduction from ITE Rates)			
	TOD Locations			Non-TOD Locations (more than 1/2 mile from station)
	0 to 1/8 Mile from Station	1/8 to 1/4 Mile from Station	1/4 to 1/2 Mile from Station	
2010 to 2020	45%	35%	30%	25%
84 million (2030)	55%	45%	40%	35%
96 million (2040)	60%	50%	45%	40%
113 million (2050) (Comprehensive Plan Level)	65%	55%	50%	45%

- Transit and vanpool subsidies
- Pre-tax deduction of transit and vanpool fares
- Telework program
- Carpool and vanpool matching service
- Shower and locker facilities for bicyclists and walkers
- Secure and weatherproof bicycle parking
- Carpool and vanpool preferential parking
- On-site car-sharing vehicle
- Employee shuttle
- Guaranteed Ride Home Program
- Commuter information center (bulletin board, website, brochure table)
- Employee Transportation Coordinator
- Flexible or alternative work hours
- TDM education programs directed at the public and employers

Parking Management

Parking Spaces Per Unit or Spaces Per 1,000 sq. ft.									
Use	Previous (2009)	< 1/8 mile Metro Station		1/8 - 1/4 mile Metro Station		1/4 - 1/2 mile Metro Station		Non-TOD	
	Min.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Townhouse	2.7	1.75	2.2	1.75	2.2	2.0	2.5	2.0	2.7
Multifamily									
0-1 bedroom	1.6	1.0	1.3	1.0	1.3	1.1	1.4	1.1	1.4
2 bedroom	1.6	1.0	1.6	1.0	1.6	1.35	1.7	1.35	1.7
3+ bedroom	1.6	1.0	1.9	1.0	1.9	1.6	2.0	1.6	2.0
Hotel/Motel	1.08	none	1.0	none	1.0	none	1.05	0.85	1.08
Office	2.6	none	1.6	none	2.0	none	2.2	2.0	2.4
Retail/ Services ^{1,2}	varies	none	See notes	none	See notes	none	See notes	See notes	See notes

- Establish parking maximums
- Encourage shared parking arrangements
- Create a parking management entity
- Secure parking management agreements
- Unbundle parking from commercial and residential leases and sales
- Allow on-street parking to count towards parking requirements
- Implement “smart parking” technology to maximize parking utilization

Dramatic Shift in Parking “Philosophy”

- Maximums instead of Minimums
 - Office
 - Current: Minimum of 2.6 spaces/1,000 sq ft regardless of location;
 - Proposed:
 - At a Metro Station - **No Min** and a maximum of 1.6/1,000 sq ft; Max is 38% less than current min.
 - From 1/8 to 1/4 mile of a Metro Station – **No Min** and a maximum of 2.0/1,000 sq ft; Max is 23% less than current min.
 - Residential
 - Proposed for 2 bedroom: 1.0 to 1.6

Monitoring System Is Essential

- WHY?
 - Plan Relies On:
 - Heroic Improvements to Transportation Infrastructure
 - High Transit Usage
 - Significant Vehicle Trip Reduction levels
- WHAT?
 - Monitoring System would:
 - Count vehicles entering Tysons to detect variations from estimates
 - Calculate delay at selected intersections and merge locations to determine if there is significant increase over time
 - Track infrastructure provision as compared to Plan

Monitoring System (Cont)

- Monitoring System would update future conditions in terms of maintaining balance between land use and transportation. Early identification of variations provide opportunity to determine effective corrective measures.

Possible Corrective Measures

- The use of TDM Remedial and Contingency Funds to increase TDM activities.
- An increase in funding sources and facility user charges.
- Congestion Pricing.
- An amendment to the Plan to modify Plan intensities and/or mix of uses.

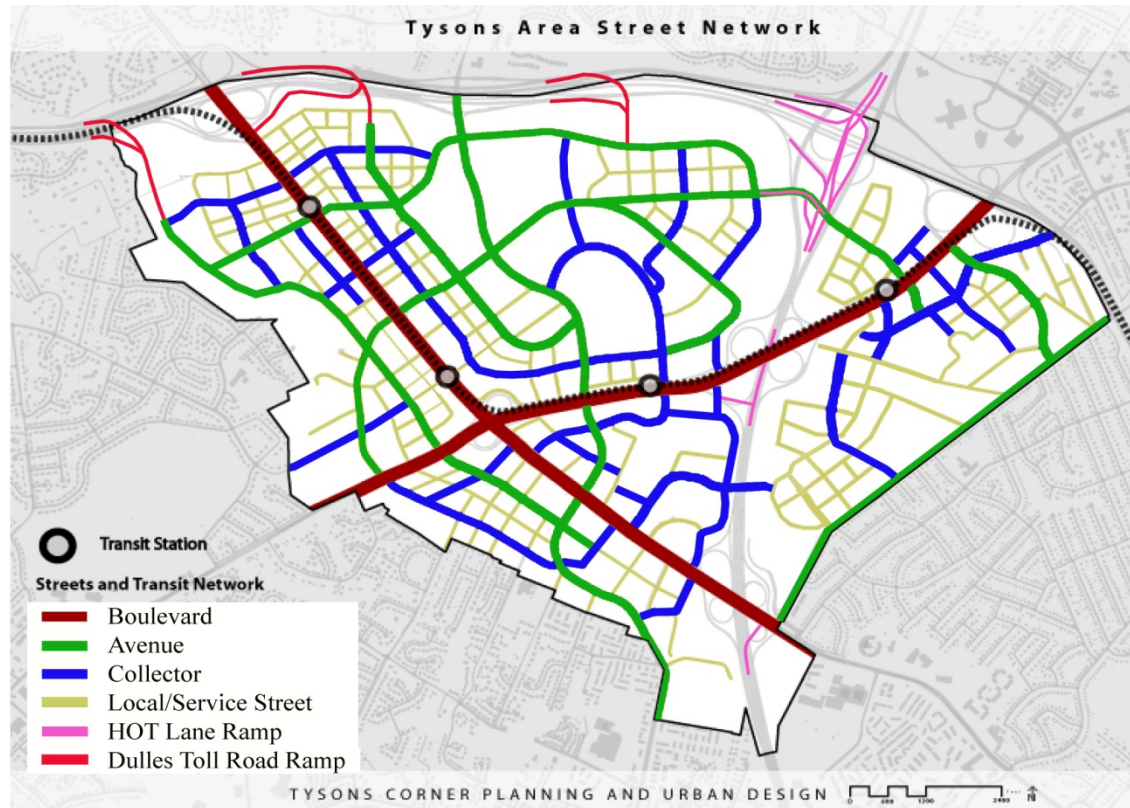
Plan Amendment Schedule

Jan. 20	Q & A on Draft Plan
Jan. 27	Public comments on Draft Plan
Feb. 24	Staff presentation of Tysons ZOA proposal; Status of Dulles Toll Road Study & Transportation Analysis w/Tysons Task Force Leadership
Mar. 3	Tysons Partnership Discussion – Funding and Implementation
Mar. 11	Continuation of public comments on Draft Plan
Mar. 17	Continuation of public comments on Draft Plan
Mar. 24	PC workshop on advertised Plan
April. 21	PC public hearing on Plan Amendment
May. 12	PC mark-up of Plan Amendment
May. 25	Board Public Hearing and Adoption

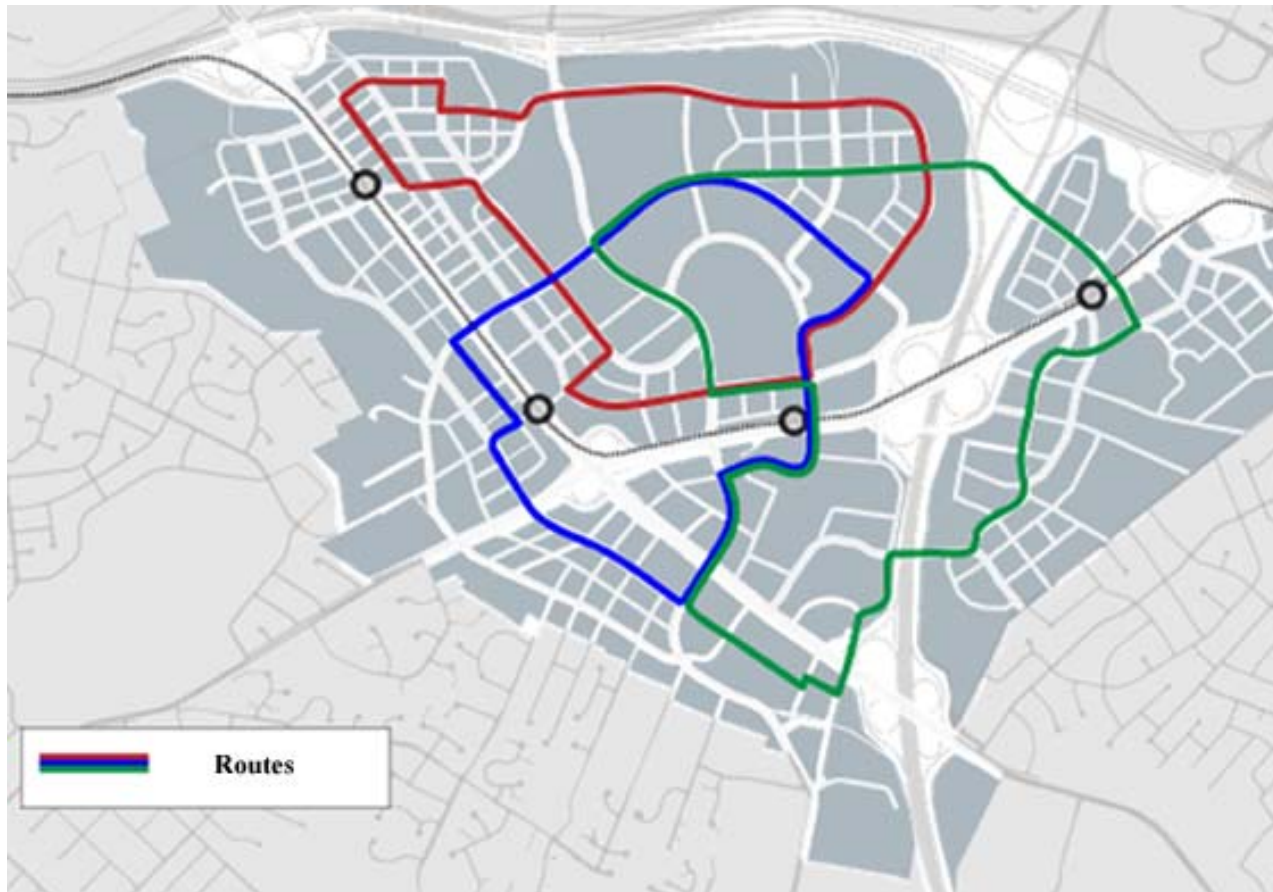
Download the Draft Tysons Plan and Find More Information at

www.fairfaxcounty.gov/tysons



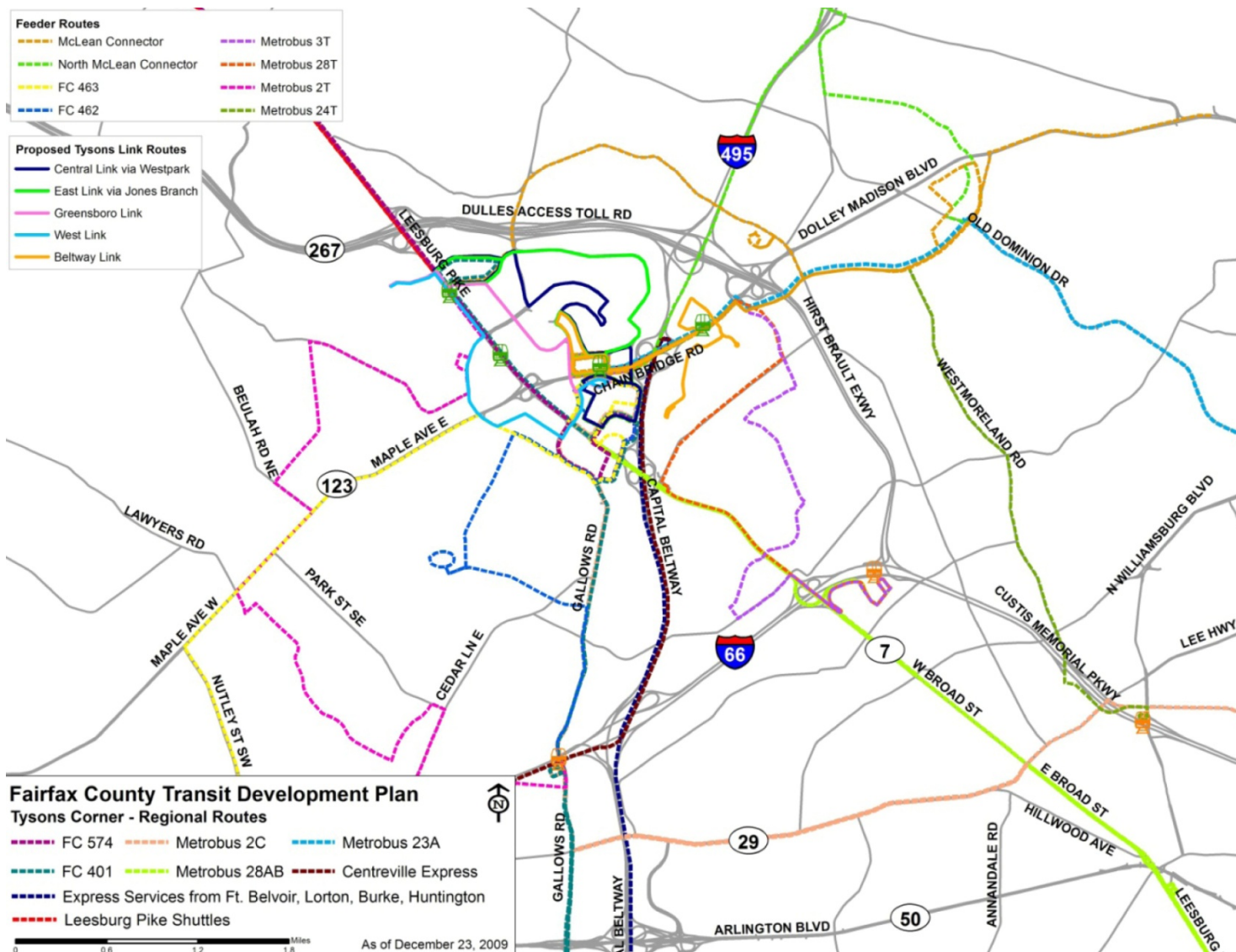


Potential Tysons Circulator Routes



Highway Functional Classification	Urban Design Functional Classification
Primary Arterial	Boulevard
Minor Arterial	Avenue
Collector	Collector
Local	Local Street
N/A	Service Street

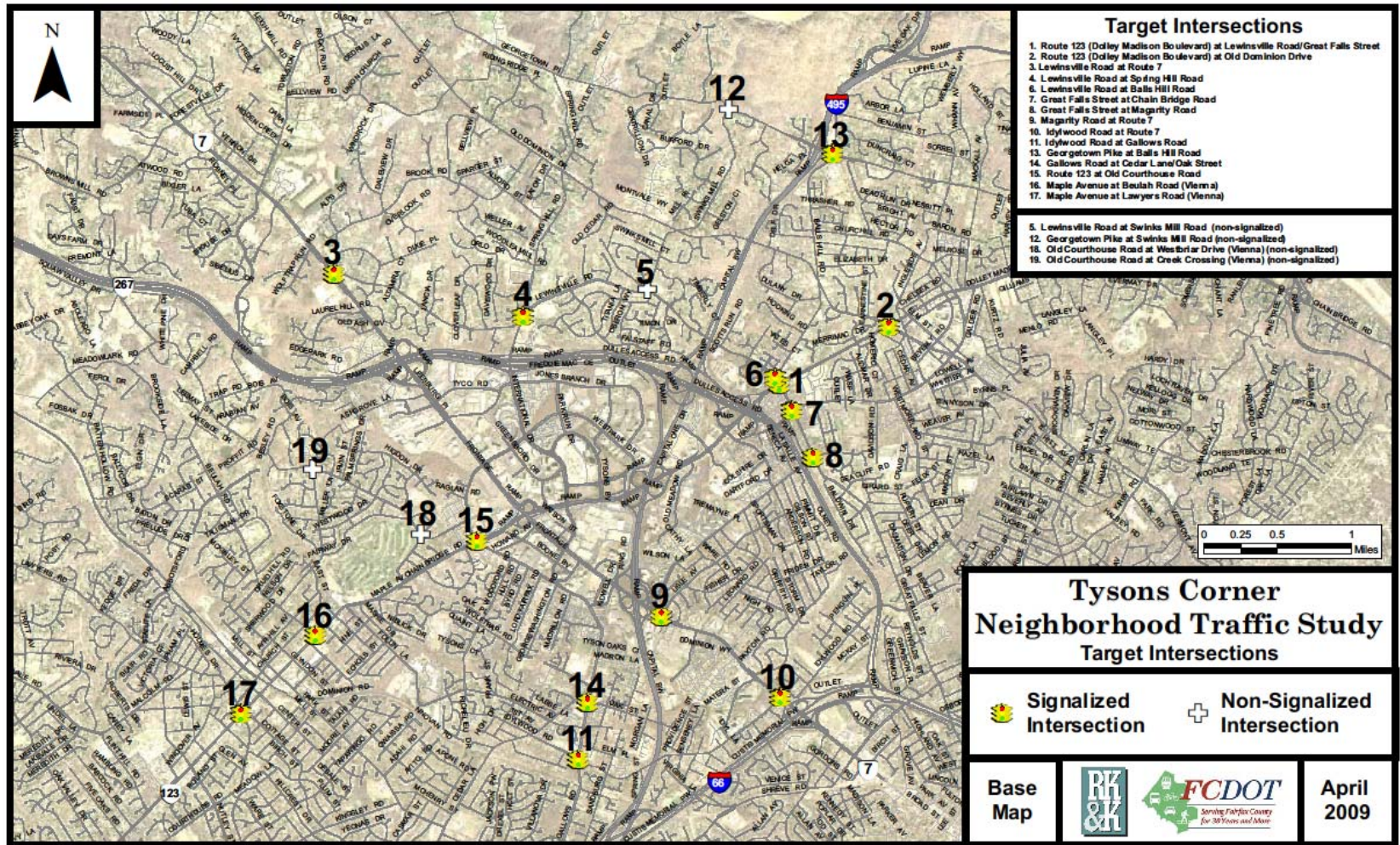
Transit Routes Serving Tysons



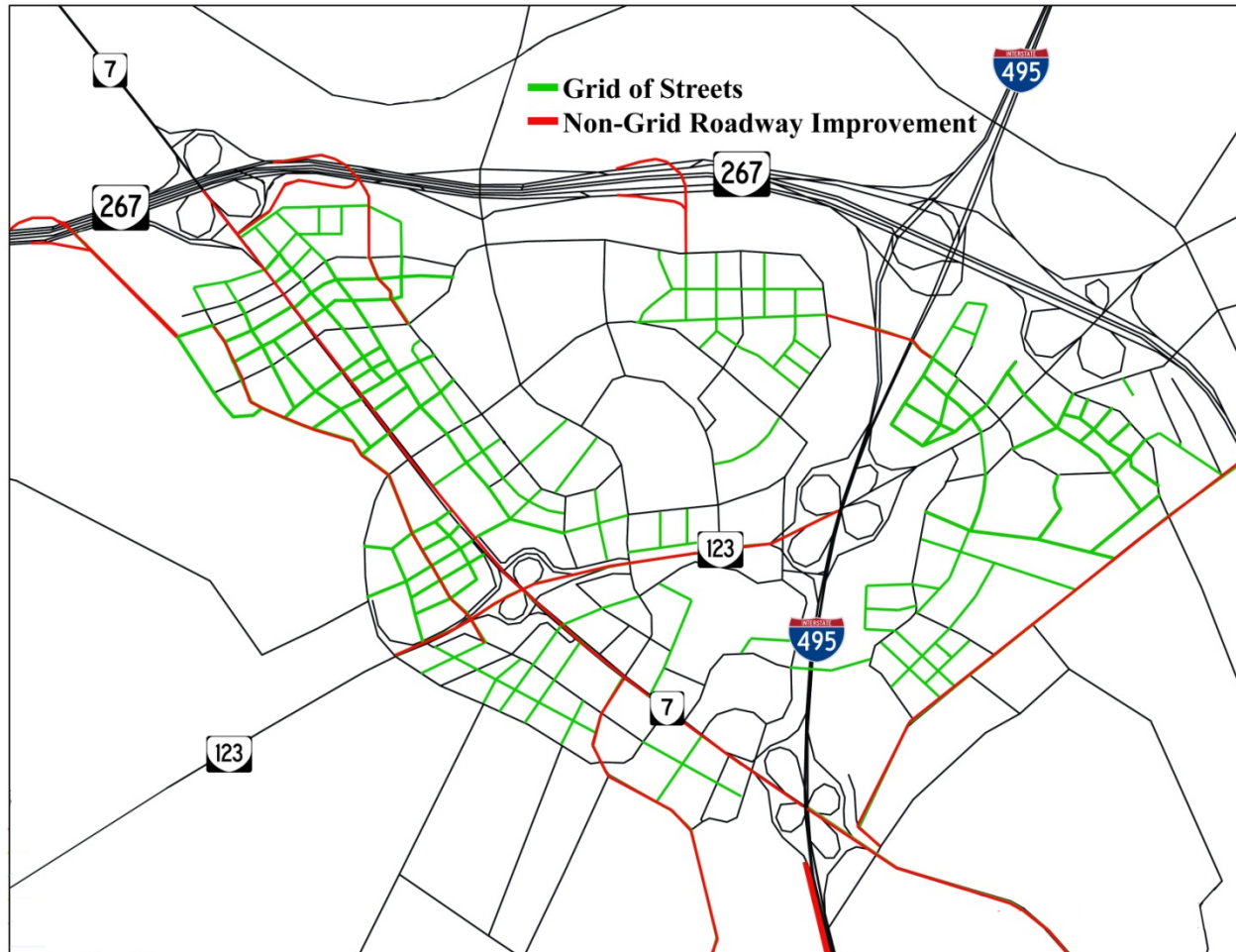
Neighborhood Study

- Nineteen intersections outside Tysons were analyzed
- Eight intersections operate acceptably today and five by 2030 (recommended Comp Plan levels of intensity)
- All intersections not operating acceptably can be mitigated by
 - by adding turn lanes or through lanes
 - by optimizing the timing of traffic signals
- With mitigation, 16 of 19 intersections operate acceptably and none fail (better than today's conditions)
- Total cost of mitigation measures: \$14 million (preliminary estimate)

Neighborhood Study



Highway Improvements



Derivation of TDM Reductions

Transit Share (from Transportation Model)

+ Recommendations from TDM Study

+ Bicycling and Walking Trips

+ Trips avoided from Site Synergy

= TDM Reductions

Derivation of Parking Requirements

- Office parking considerations
 - 4 employees per 1,000 s.f.
 - auto mode share
 - visitor parking
 - 5% inefficiency (difficulty finding last few spaces)
 - recommended rate compared with observed parking accumulation
- Residential recommendation based on consultant recommendation and comparable jurisdictions
- Current retail and service use minimums as maximums (recommended in numerous TOD reports)

Tyson's Estimated Transportation Capital Costs (2009 \$'s)

Period	Transit Capital Costs	Road Capital Costs
2010 to 2030	\$127 million	\$1.5 billion
2030 to 2050	\$2.9 billion	\$493 million

Tyson's Estimated Transit Operational Costs (2009 \$'s)

Period	Transit Operational Costs
2010 to 2030	\$754 million
2030 to 2050	\$1.1 billion

Transportation Analysis

- Worked closely with DPZ and OCRR
- Recommendations will allow a balance between land use and transportation
- Elements of Analysis
 - Wide range of development scenarios (44 - 161 million sq. ft.) were analyzed
 - Identified transportation infrastructure, services, and programs and how to phase them to over time
 - Impact on surrounding neighborhoods
 - Additional projects are ongoing

Transportation Recommendations

- Transportation system capable of supporting recommended development level (113 – 116 million sq. ft. by 2050)
- Ambitious but achievable
- Necessary elements to make it work
 - Phased provision of transportation infrastructure, services, and programs
 - Vehicle trip reduction due TDM programs, transit usage, parking limitations, increased residential development, and excellence in urban design
 - Strong monitoring system

Examples of How Transportation Factors will Change in Tysons

Factor	Tysons Today	Tysons in 2050
Trips by Transit	3% to 5%	36% (TOD areas)
Parking Rates for Office	Minimum of 2.6 spaces per 1,000 sq. ft.	Maximum of 1.6 spaces per 1,000 sq. ft.
Typical TDM goals	Reduction in vehicle trips for office development: 25% to 30%	Reduction in vehicle trips for office development close to rail stations: 65%

Innovative Components of the Transportation Plan for Tysons

- Application of Intelligent Transportation Systems as part of the proffer process
- The establishment of transportation hubs (multimodal transportation centers)
- A maximum parking rate with no minimum
- The monitoring of vehicle trips in and out of Tysons over time
- The provision for a circulator on its own right-of-way
- Specific measures to maintain a balance between land use and transportation over time

Fairfax County/Arlington County Data Comparison

	Fairfax	Arlington
Estimated 2008 Persons Per Square Mile	2,570	8,116
Land Area (Square Miles) Per Metrorail Station	33	2
Total Lane Mileage Per Square Mile	17	23

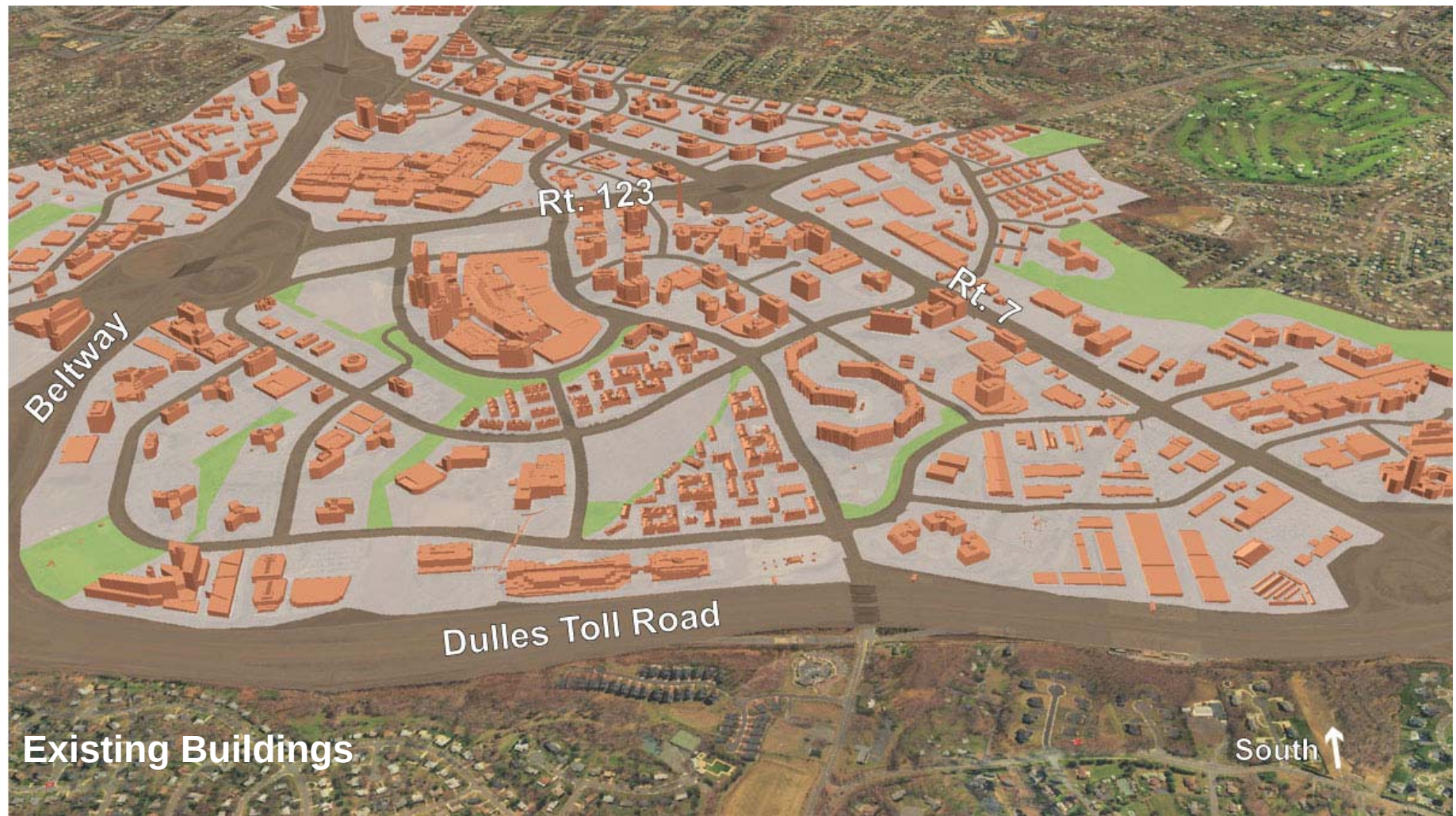
Largest commute (2030 estimate):

For Tysons it is to and from Fairfax County: 60% of all work trips

For Arlington it is to and from Washington D.C: 46% of all work trips

Visualization and 3-D Modeling

Used to help formulate recommendations



Visualization and 3-D Modeling

Used to help formulate recommendations

