

Tysons Corner: Path to the 21st Century

Draft Summary of Findings
Prepared for Tysons Land Use Task Force
27 February 2008



Tysons West near Tyco Road looking east

The new Tysons is not about tall buildings.
It's about growing better -
about being a place people want to be part of.

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1. EXECUTIVE SUMMARY

Introduction

To succeed, Tysons needs to grow better, not simply bigger. For almost three years, the Tysons Land Use Task Force has worked on creating a future for Tysons that does just that - improves the livability of Tysons Corner as well as that of the region. After many public forums and analysis of different growth options for the future, the Task Force has refined its discussion to three futures for Tysons.

This document summarizes these three futures: the Base Case, Prototype A, and Prototype B.

- **Base Case:** Continuation of the current Comprehensive Plan with minor modifications which adapt the Plan's land use recommendations to address the four Metrorail stations. Lowest level of growth.
- **Prototype A:** Development focused around the four transit stations, and a circulator to improve connectivity. Mid-level of growth.
- **Prototype B:** Development extended beyond the four transit stations, and a circulator that gives form to the development. Highest level of growth.

Alternatives Comparison			
	Square Feet of Development	Residents	Employees
Base Case	74 million	35,000	161,500
Prototype A	96 million	72,000	159,000
Prototype B	127 million	100,000	203,000

This document describes the key elements of the Base Case and the two Prototypes, analyzes their land use and transportation functions, describes the two transportation networks (auto oriented vs. transit oriented) tested, presents their visions for each of eight distinct Districts within Tysons and also compares the likely outcomes of implementing the two prototypes to those of the Base Case.

Comparing the Prototypes

- New development is focused on transit with 70% of all new square feet of development at the stations.
- The form-giving function of the circulator in Prototype B provides a major difference in the location of growth.
- Intensity of buildings is tiered with up to 30 story buildings within an 1/8 mile of the stations and minimal change in density along the edges of Tysons.
- The two Prototype tested on two transportation networks work relatively well and result in similar congestion levels to the Base Case.
- The transit oriented transportation network better supports the land use vision proposed for Tysons.
- Community benefits are tied to growth with civic uses focused at transit.
- More parks and open space are identified, but the overall amount of park land provided is less than the urban standard for the number of people in Tysons.



Tysons Central 7 looking north on Old Courthouse Road at the Metrorail station. The new Tysons depicted in the prototypes will be more walkable, more mixed-use, have much more housing and lower levels of congestion than under the base case.

An architectural rendering of a city street scene. In the foreground, a man in a light-colored suit and tie walks towards the viewer, carrying a briefcase. To his left is a multi-story brick building with balconies and flower boxes. In the background, a tall, modern glass skyscraper rises against a blue sky with light clouds. The street is populated with other pedestrians and trees, creating a vibrant urban atmosphere.

“Unless we change how we grow, we threaten Tysons economic vitality and way of life. We must put more emphasis on mass transit and changing our land use patterns to accommodate the people and jobs coming to this region in the next 25 years”

Bill Lecos
President
Fairfax County Chamber of Commerce

February 25, 2008



1. THE VISION

The Tysons of tomorrow is the place in which people want to live, work and shop. In 25 to 30 years, Tysons has transformed into a world-class downtown destination known for great shopping, a prestigious office location and residential address featuring ample affordable housing, people-oriented streets, a variety of open spaces and convenient transit. It has become the second downtown for the Washington Capital Region, exceeded in importance only by the downtown area in the District of Columbia.

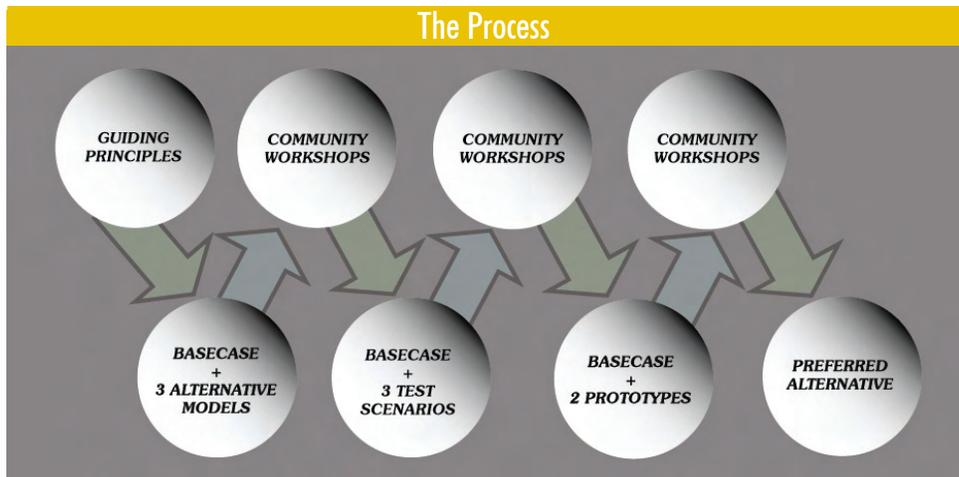
As you ride Metrorail through Tysons, two things are immediately apparent: Tysons is bigger and better. Around the four Metrorail stations, you notice clusters of tall buildings of 20 to 30 stories. Down tree lined streets, you also see that this bigger Tysons is not just about tall buildings. It's about growing better – being a place people want to be part of. People are eating lunch at sidewalk cafes, jogging down tree lined boulevards, and playing in the parks.

The new Tysons is highly livable. It is the place in which people want to live, raise families, and retire. Tysons is an active place 18 hours a day, providing a variety of residential, office, retail and entertainment uses. Everywhere in Tysons, pedestrian friendly connections and frequent transit service enable people to move easily through Tysons. High quality parks and open space give people a variety of places to gather and socialize.

Although it is the new downtown for Northern Virginia, not all of Tysons has the same density or character. Each area around a Metrorail station has a different personality and function. Each street has its own personality with landscaping, street art, storefronts and amenities making the streets people friendly. The character of place changes from an intense and busy downtown bustle around the stations to lively neighborhoods leading to the edges of Tysons. As you move closer to the adjacent neighborhoods outside Tysons, the pattern of development carefully transitions down to a scale and uses that respect these adjacent communities.

To succeed Tysons needs to grow better, not simply bigger. Growing better means:

- Having a clear vision to guide growth;
- Leveraging Metrorail as a catalyst to reshape Tysons;
- Protecting adjacent neighborhoods;
- Adding community benefits, parks and civic space - the ingredients of a vital place; and
- Creating the structures for growth to pay its fair share and to see that the vision is realized.



2. CREATING THE VISION

To guide the vision for the future Tysons, the Tysons Land Use Task Force created a set of Guiding Planning Principles that set the direction for future growth. In a nutshell the principles call for:

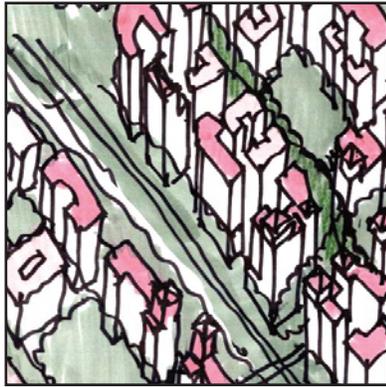
- Focused growth within Tysons and around transit;
- A mix of uses for an active 24-hour place;
- Increased connectivity and walkability; and
- Preserving & enhancing natural features.

For almost three years, the Task Force has been listening, testing and refining. The community within and around Tysons has shown a strong interest in its future. More than 1,800 people participated in over 40 workshops and focus groups and almost 50 Task Force meetings, as well as dozens of subcommittee meetings. Hundreds of others have sent in comments on the internet. The Task Force listened to these community values and ideas for how Tysons should grow.

The Task Force’s major public outreach efforts included:

- A series of 20 community dialogues held in January and February 2006 that resulted in the development of Guiding Planning Principles. The Guiding Planning Principles can be found on the project website at <http://www.fairfaxcounty.gov/dpz/tysonscorner/nofind/adptplanprinciples.pdf>.
- A series of six public workshops held by the Task Force in March 2007 to help create future development scenarios for testing purposes.
- Three public workshops in July 2007 that focused on the results of the test scenario analyses. Based on the public’s input on what works and what doesn’t work, the Task Force and the consultants developed the two prototypes discussed in this report.

The Prototypes, along with the Base Case, test different amounts and scales of growth and different patterns of development. Any of these futures, or a variation of one of the futures, could be a viable outcome for Tysons. As early as the spring of 2008, the Task Force will forward recommendations to the Fairfax County Planning Commission and to the Board of Supervisors regarding a Preferred Future that incorporates the best features of these prototypes.



3. TRANSFORMING TYSONS

The prototypes constitute a fundamental transformation of Tysons from a suburban place to an urban place as prescribed by the vision. They create a Tysons that grows into a “downtown” for Northern Virginia, and extend the benefits of compact development to the entire region. These land use transformations make the Dulles Rail project an even better idea by significantly increasing the potential ridership of the extended Metrorail system.

The prototypes make Tysons a place in which most of the growth is focused within an easy walk of transit and a place with a series of distinct and unique urban neighborhoods. To guide Tysons to a different future – one that creates a more livable place for its residents and employees – the prototypes incorporate several key strategies and features that result in a vastly different place than that which would likely evolve from the Base Case. These differences from the Base Case are as follows.

Best practices of urban design, drawn from successful places around the world, were applied to the prototypes, including:

- **More square feet of development** than today, focused within an easy walk of transit.
- A **greater mix of uses** than today, including more housing and housing types that are affordable and sized for families.
- **Quality parks, open space** and civic gathering places.
- **Complete streets** and a finer grid of streets than today.
- **Transportation enhancements** such as transportation demand management strategies and parking reductions.
- **Transit circulators** that connect Tysons – both have the same level of service, but how the circulators are integrated into the pattern of development differs.
- **Good urban design** to enhance the livability and walkability of Tysons.
- **Enhanced urban infrastructure.**



New Land Use Mix and Tiered Intensity

Tysons is today the 12th largest business district in the United States, based on square footage - larger than Phoenix or Atlanta. The development levels that the Task Force process is reviewing would make Tysons equivalent to the 6th largest business district in the United States.

The level of development tested in the two prototypes builds on the current strength of office uses in Tysons and provides the additional housing to enable Tysons to remain competitive in the future.

Tested Development Levels			
	Total Floor Area (sq. ft.)	Residential Population	Employee Population
Existing (2006)	44 million	16,000	105,000
Base Case	74 million	35,000	161,500
Prototype A	96 million	72,000	159,000
Prototype B	127 million	100,000	203,000

These levels of growth pose many challenges. Analyses of the previous test scenarios as presented in July 2007 revealed that any growth beyond the current 44 million square feet of development will be a big step given the current experience and implementation tools available to Tysons. Growth in excess of 100 million square feet of development creates substantial public infrastructure challenges. The ability of Tysons to maintain its existing regional market share in the future may be another significant challenge.

Mix of Uses - Providing a mix of uses, either vertically (in the same building) or horizontally (within a 2 to 3 block area), reduces the distance between residents and services, enabling and encouraging people to walk rather than drive to fulfill many of their daily needs. The mix of uses in the prototypes includes the same land uses that exist in Tysons today (residential, office, retail, and hotel). Yet in contrast to today's Tysons, the prototypes establish a greater balance between residential and employment uses, reduce the amount of low impact but land hungry uses (such as car dealerships or surface parking lots), and adds a number of civic uses. Eight different types of land uses are presented for each prototype. Descriptions and examples are provided in the appendix.

Land Use Intensity - In general, the development is the most intense at the stations and the least intense at the edge. The highest development intensity, between 4.5 and 5 FAR (Floor Area Ratio), is within 1/8 mile of the rail stations – the station core in which research in transit oriented development (TOD) reveals more people are likely to walk and take transit. Moving out from this core, the next ring of intensity is between 3.0 to 4.5 FAR and extends out 1/4 mile from the Metrorail station. The focus and character of this area is consistent with the station core that it surrounds, yet allows for the gradual transition from the more intense station cores to the less intense urban neighborhoods, neighborhood edges and employment areas. Under Prototype B, a mid-level intensity of 2.5 FAR surrounds the transit circulator as a means to encourage more walking. On the edge, neighborhoods have a lower density of residential mixed-use development consistent with the communities adjacent to Tysons. Neighborhood edges are farther away from large centers of employment and have lower densities to provide the transition between Tysons and neighboring communities. The decision rules from the Task Force Workshop in November 2007 which guide the land use intensity tiers can be found on the project website at http://www.fairfaxcounty.gov/dpz/tysonscorner/advant_notes_11282007.pdf.

New Parks and Open Space - The new parks and open space system creates gathering places that support community-building and provide an oasis of green, natural areas in an intensely urban environment. Urban parks improve air quality, reduce stormwater runoff and impervious surfaces, improve community health and provide opportunities to allow people to meet their neighbors in a safe environment.

The vision for Tysons' provides a connected parks and open spaces network consisting of enhancements to the Scotts Run and Old Courthouse Spring Branch stream valley parks, new small urban pocket parks, urban neighborhood parks, a large, centrally located public park, civic gathering spaces, rooftop parks, and green streets that provide opportunities for walking throughout Tysons. The signature piece of the park network is a large civic gathering plaza, located within a short walk of the Tysons Central 7 station. This plaza is large enough to support a weekend craft fair or farmers market, summer concerts or weekend festivals.

The parks and open space concepts provided for the Prototypes create a framework for an integrated system – one that has an overall vision of where parks should be located to best serve the overall needs of the residents and employees in Tysons. The park land can be publicly owned, privately owned, or a public-private partnership. Examples of park types are provided in the appendix.



“Urban parks are often the cornerstones of vital, healthy urban communities”

George T. Frampton, Jr.,
Former chair,
White House Council on
Environmental Quality



New Transportation Options

Moving people in an efficient and effective way requires demoting the car as the prime focus of transportation planning for Tysons. Streets must be complete streets, designed to create a sense of place. Transit must be expanded to serve the outlying areas. Walking and biking must become feasible alternatives to driving. Transportation demand management (TDM) strategies must be in place to facilitate changes of behavior.

The prototypes for Tysons include two transportation networks: Network 1 emphasizes auto travel into, out of, and through Tysons; and Network 2 emphasizes travel within Tysons, especially for transit, pedestrians and bikes. The components of both these transportation networks are listed in the “Transportation Network Elements” table.

For both transportation networks, the level of congestion is lower or similar to that of the Base Case. Network 1 appears to lower congestion levels and reduces congestion on VA 7. Network 2 produces better conditions for non-motorized travel. Detail on the two transportation networks tested is included in the appendix.

The key components of the networks (refined street grid, addition of the transit circulators, and TDM strategies) increase transit, walk, and bike trips substantially over the base case. The functions of those elements are described below.

Transportation Network Elements		
	Network 1	Network 2
Metrorail extension and HOT Lanes	●	●
Beltway HOT Lane improvements	●	●
Enhanced TDM and parking management	●	●
Enhanced connectivity; grid of streets	●	●
Grade separations at key intersections and access management on Route 7 and 123	●	
Additional ramps to the Beltway and Dulles Toll Road	●	
Transit Circulators (in mixed traffic)	●	
Transit Circulators (dedicated right of way)		●

Complete Streets - The enhanced grid of streets provides for greater network density and more direct connections between various locations as well as better accommodating both cars and pedestrians. More importantly, this new network has Complete Streets built into it.

Great places are defined, in part, by complete streets. In a TOD, streets need to be great places for walking, for commerce, for casual interaction and for moving traffic.

The interplay between human activity and the physical space created by streets and buildings has an enormous effect on making a complete street. As we think about designing streets and the public realm in a TOD, we need to keep in mind the importance of some simple ideas and principles. Allan Jacobs, in his influential work "Great Streets," describes several key criteria, including:

- Are memorable and "magical;"
- Help make community;
- Are defined, engaging to the eye, and artful;
- Support social contact and participation;
- Are physically comfortable and safe; and
- Exhibit quality design, construction, and maintenance.

Descriptions and examples of complete streets are provided in the appendix.

Circulator - A system of transit circulators connects most of Tysons with the four Metrorail stations. The circulators target retail and other non-work trips, such as errands that need to be run during the work day. Adding this system of circulators gives more people access to the regional rail system without getting into their cars, making it more likely that people who live or work more than a ¼ mile from a Metrorail station will choose to take transit. The routes shown for the prototypes are conceptual and only intended to illustrate the application of the concept.

Transportation Demand Management (TDM) - Transportation Demand Management (TDM) strategies reduce the number of car trips and increase the efficient use of all transportation resources. The expected outcome of applying TDM strategies in Tysons is an increase in transit ridership and a reduction in auto trips. Proposed TDM strategies for Tysons include: transit coordinators; carpool/vanpool incentives; transit subsidy flex-work arrangements; guaranteed ride home; and parking management.

Parking - "Right-sizing" parking - providing no more parking space than needed to support the uses it serves - is key to reaping many advantages of fitting the new Tysons with transit, increasing density, providing a more effective mix of uses and a more walkable environment. All of those features collectively and individually push down on the need to use cars and, consequently, the need to provide parking. Parking ratios in transit-oriented developments require fewer parking spaces than conventional developments. TODs often have parking maximums to prevent building more parking than is needed (and to save development costs and further encourage transit use). As in a real downtown, the prototypes treat parking as a common resource for the uses within the different districts in Tysons, rather than thinking about parking as a requirement of each building - an approach that inevitably leads to oversupply and wasted use of resources.





New Design Character

Planning for TOD allows you to treat land use differently than conventional development because TODs encourage people to behave differently. People living and working in TODs walk more, use transit more and own fewer cars than the rest of the region. TOD seeks to align transit investments with a community's vision for how it wants to grow. A successful TOD will reinforce both the community and the transit system.

The following 17 urban design principles define the essential characteristics and strong sense of place of all successful TODs. They are based on Task Force consensus and related decisions, principles of good urban design and TOD planning. Together, the principles form a "constellation" of main guiding points.

Regional Identity

1. Advance Tysons as the vibrant downtown of Fairfax County.
2. Transform Tysons from an auto-oriented, separated land use suburban activity center into a highly desirable walkable, transit-oriented, livable urban environment.

Identifiable Centers & Edges

3. Create unique identifiable, livable districts, neighborhoods and centers within Tysons at a walkable scale.
4. Concentrate the greatest density at transit stations with transit-oriented land use mixes.

Vibrant Streets & Walkable Block Pattern

5. Balance increasing efficiency of traffic movements to, through and within Tysons by interconnecting separated areas of Tysons and creating a transit-oriented environment.
6. Create pedestrian and bike friendly environments throughout Tysons.
7. Create a hierarchical, fine grain network/grid of streets and street types that shape an orthogonal, walkable block pattern.

Quality Public Realm & Natural Features

8. Encourage sustainable, human-scale, urban building types and architectural design that address and open onto the pedestrian realm.
9. Create a diverse, attractive public realm with parks, tree-lined streets and public gathering places defining the character of each district and neighborhood.
10. Restore natural drainage systems, improve water quality and create a secondary system of non-vehicular paths with continuous open space networks.

Mix of Uses

11. To ensure urban character, require mixed-use development where commercial, residential and civic uses are an integral part of districts, and not isolated single use complexes or in remote locations.
12. Attract new residents to Tysons, with creative urban living housing diversity and affordability.

Balance Growth & Community Benefits

13. Establish and apply a broad palette of amenities for urban livability.
14. Balance the sufficient provision of community benefits, infrastructure and public facilities with the pace of development.
15. Create cooperative planning/development management and permitting processes to ensure high quality urban design.

Edge Areas

16. Protect the character and livability of adjacent residential neighborhoods.
17. Transition building heights and density to provide greater compatibility with other Tysons districts and adjacent residential neighborhoods.



4. TWO DIFFERENT PROTOTYPES

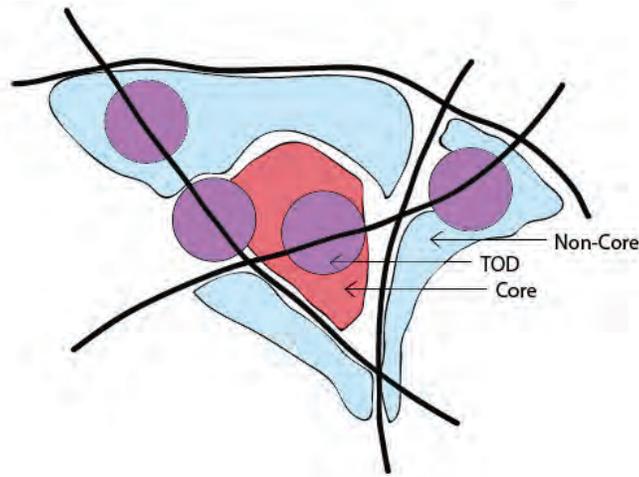
The two prototypes now under review were built from the ground up, using extensive input from the Task Force. Each uses the same ingredients to make them different from the Base Case: more development, more housing, transportation enhancements, a circulator, and more extensive urban design treatments. Both prototypes provide community benefits beyond Tysons itself.

Nevertheless, the prototypes apply these ingredients in different ways. Prototype A focuses growth around the four Metrorail stations. Prototype B allows transit to shape the growth by placing greater density around the transit circulator that serves the majority of Tysons as well as around the four Metrorail stations.

The following chart summarizes the key differences between the prototypes and the Base Case.

Prototype and Base Case Comparison					
	Development (sq ft)	Residents	Employees	Urban Design Pattern	Circulator Function
Base Case	74 million	35,000	161,500	Comprehensive Plan adjusted for four stations	No circulator
Prototype A	96 million	72,000	159,000	Focused TOD	Serving development
Prototype B	127 million	100,000	203,000	Extended residential TOD	Shaping development

Development program details for the existing conditions (2006), Base Case, Prototype A, and Prototype B are provided in the appendix.



5. BASE CASE

Tysons under the Base Case remains largely a job-heavy, auto-focused edge city environment. The Base Case lacks specific additional guidance linking the Metrorail extension to future land uses beyond that in the current Comprehensive Plan. Beyond the station areas, the Base Case results in moderate change in the essential character of today's development. Tysons will continue to be an employment center with some increased residential opportunity. In areas not in close proximity to future Metrorail stations, it will also remain a predominately auto-oriented environment that is a largely pedestrian-unfriendly place. The Base Case includes 74 million square feet of development, 35,000 residents and 161,500 employees.

The main characteristics of the Base Case are:

- Development in size and type that is consistent with the current Comprehensive Plan.
- Development around the transit stations that is mixed-use TOD and the balance of the land uses in Tysons that remains as separate single uses.
- Provision of community benefits that are done through individual development negotiations and not guided by a detailed overarching framework.
- Moderate levels of growth. Overall development is only 67% more than 2006 - much less than that of Prototype A or B.

Land Use Mix

- The land uses are distributed roughly in accord with the current Plan's core and non-core concepts. The core areas surround the Tysons Central 7 and Tysons Central 123 Metrorail stations.
- Approximately 80% of the new development is within a 5 minute walk of the transit stations.
- 29% of the development is residential and 71% is employment.
- There is an imbalance of jobs and households, with 9.2 jobs for every household in Tysons.

Intensity

- The level of intensity is consistent with the current Comprehensive Plan.
- More intense office and residential redevelopment primarily around the four new Metrorail stations.
- Higher density housing – high-rise and mid-rise apartments and condominiums are proposed west of the Beltway and mid-rise apartments and garden apartments are proposed east of the Beltway.

Parks and Open Space

- Only some portions of Tysons have pockets of green space and public plazas as gathering places for the community.
- 65 acres of park land are needed based on the Fairfax County Park Authority's draft urban park standards.

Transportation

- Congestion is still significant despite some new pedestrian and bike connections and adding a few local roads that take some pressure off Leesburg Pike and other arterials.
- 7,500 households and 60,300 jobs are located in the station areas served by the Metrorail.
- The Base Case has no circulator as part of its transportation network.
- The single occupancy vehicle remains the dominant mode of travel. For daily work trips (to/from residences), 62% are single occupancy vehicles, 20% transit, and 18% other.
- Congestion is high, with 10% of the AM trips, 38% of the PM trips, and 18% of the off-peak trips occurring under highly congested conditions.
- An urban-style grid of streets is not envisioned and blocks remain “super-sized.”

Urban Design

- Limited guidance in the Comprehensive Plan related to urban design. No overall vision for how or where community benefits are to be provided for Tysons.
- Mixed-use TOD around the stations. Isolated, single use complexes in the balance of Tysons.
- Maintains existing character of development along the edges of Tysons.

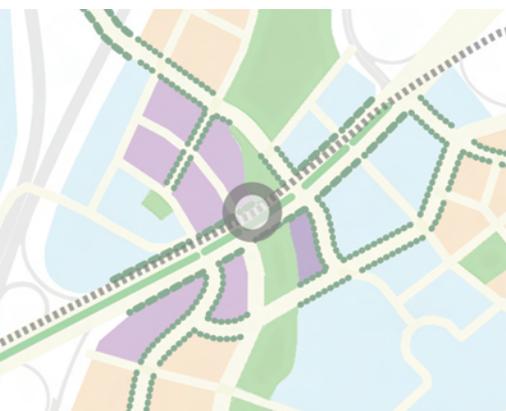
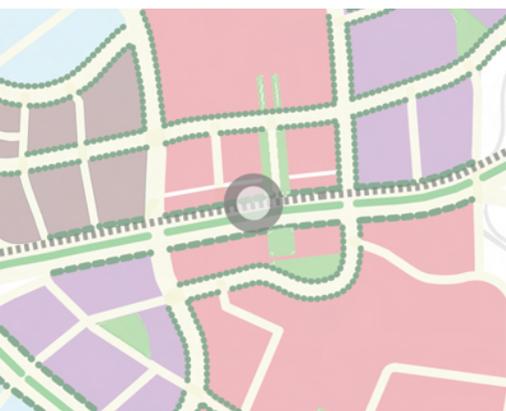
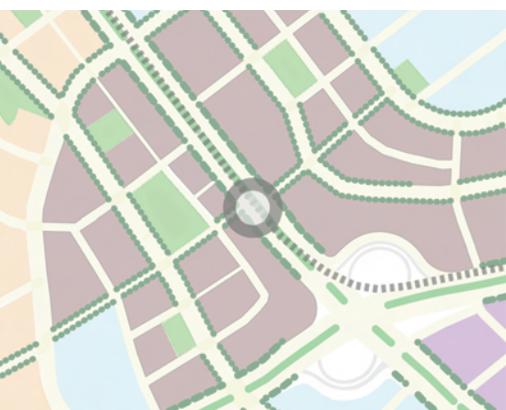
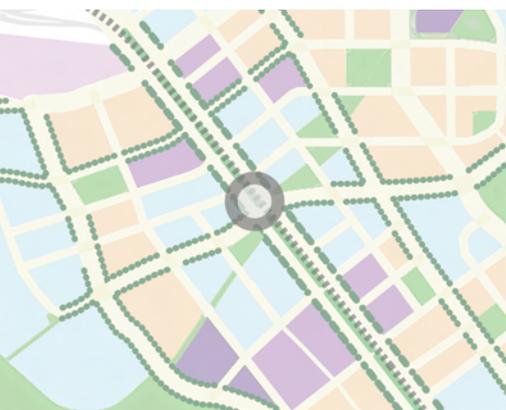
Public Facility Needs

- A new electric substation, south of the intersection of Route 7 and Spring Hill Road, adjacent to the existing transmission line.
- Relocation and expansion of the existing Tysons fire station (Station 29) to Jones Branch Drive.
- A new fire station in the vicinity of Old Meadow and Chain Bridge Road.
- A new police station in the Merrifield/Dunn Loring area.
- A mini-library, with minimal print collections but extensive online access to electronic databases, to serve Tysons.
- New strategies and facilities to manage wastewater.
- Additional water transmission facilities (pipelines, storage, and pumps) and distribution facilities (water mains).

More details regarding public facilities needs are provided in the appendix.

Base Case: Development Program	
Total Square Footage	74,328,000
Non-residential Square Footage	52,998,000
Residential Sq. Ft.	21,330,000
Land Use Mix	71% employment / 29% residential
Net New Development in the TODs	80%
Net New Development outside the TODs	20%
Total Development in the TODs	66%
Total Development outside the TODs	34%
Percent increase from 2006	67%
Jobs	161,500
Dwelling Units	17,500
Residents	35,500
Acres of Urban Park Land Needed*	65
Acres of Urban Park Land Provided	Unknown

*Based on Fairfax County Park Authority draft urban standards



6. ADVANCED PROTOTYPE A

Prototype A focuses a higher proportion of total development around the four Metrorail stations. Almost all (87%) of the new development is located within TOD areas. A total of 96 million square feet of development is proposed, more than twice (120%) of what exists today. 159,000 jobs and 72,000 residents are proposed in Prototype A, providing a stronger residential base than currently exists in Tysons.

Unique characteristics of Prototype A include:

- High intensity development focused around the four Metrorail stations. This gives the Dulles Rail project increased ridership benefits achieved from intense development around transit.
- Much more residential development than currently exists or would occur under the Base Case.
- Overall employment similar in scale to downtown Seattle.
- Tiered intensity of development from the greatest densities at the transit stations to the lowest densities near the edge.
- A series of urban parks and greenways located throughout Tysons.
- Complete streets that lead from the station areas to the surrounding neighborhoods.
- Transit circulators linking all of Tysons.

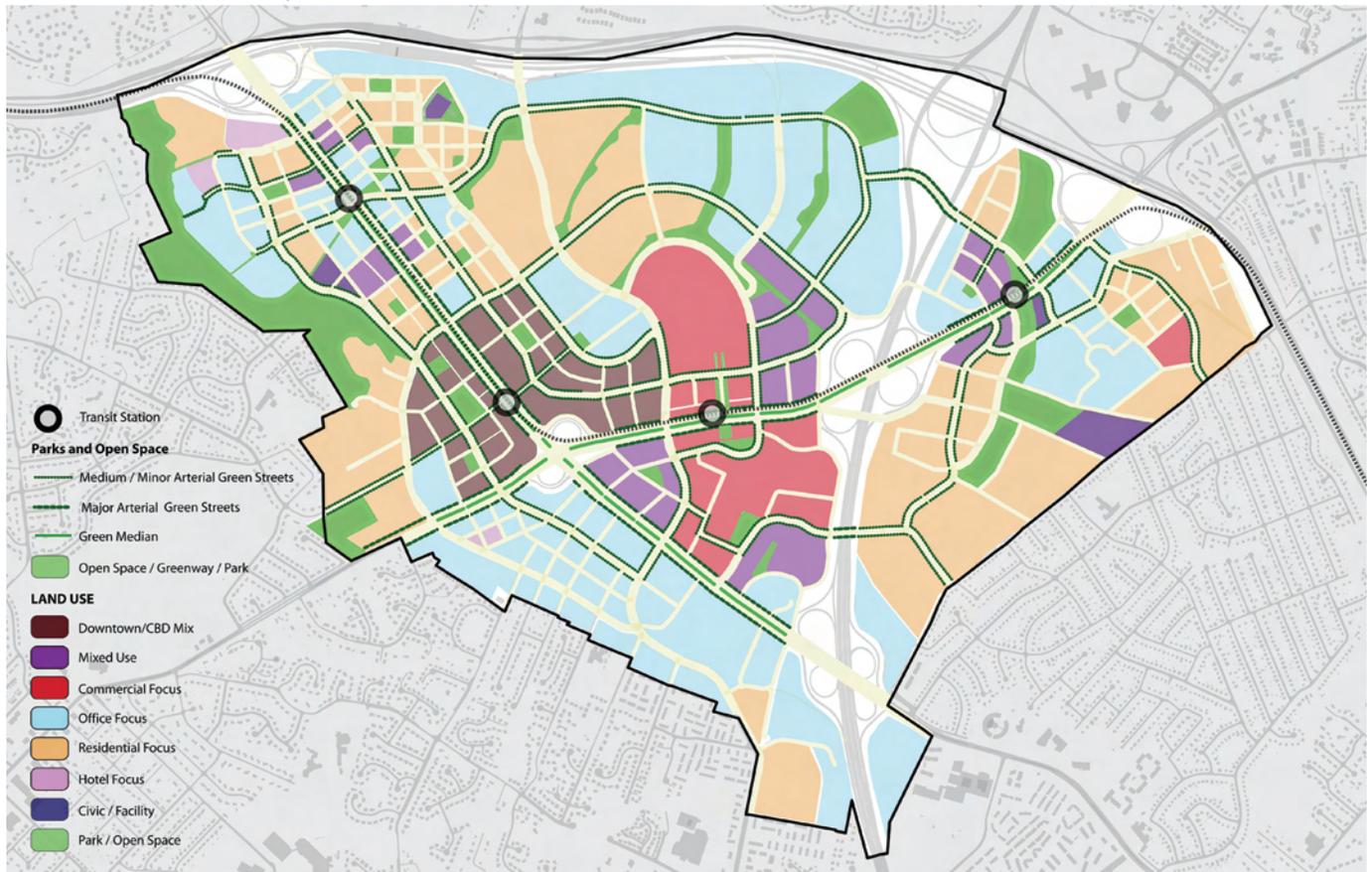
Land Use Mix

- Two-thirds of the new development is residential and one-third is employment.
- The total square footage of the land uses are 55% non-residential and 45% residential.
- Prototype A's ratio of jobs to housing is 4.4 to 1, as compared to a ratio of 9.2 to 1 for the Base Case. This improved jobs housing balance can:
 - Increase transit ridership both to and from other major centers along the Metrorail system;
 - Support an 18-hour atmosphere and amenities that a live-work-play community includes; and
 - Increase the number of people walking, biking or taking transit between work and home.

Intensity

- TOD areas capture 73% of total square feet of development in Tysons.
- Development on the edge of Tysons is limited, at approximately the same intensities and square footage as would occur under the Base Case.
- FARs are highest near the Metrorail stations (4.5 FAR within 1/8 mile of the stations).
- Densities identified in the Comprehensive Plan are maintained for the edges, especially along Magarity, Old Courthouse and Gosnell Roads.

▼ **LAND USE, PARKS AND OPEN SPACE NETWORK**



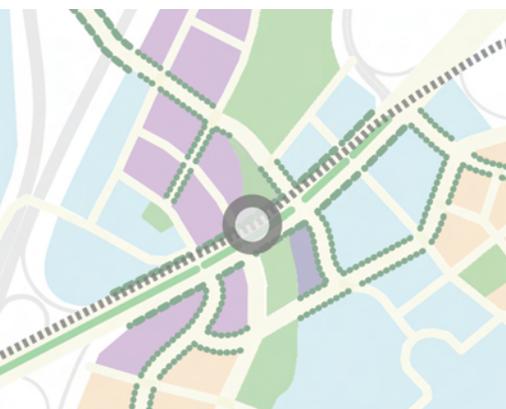
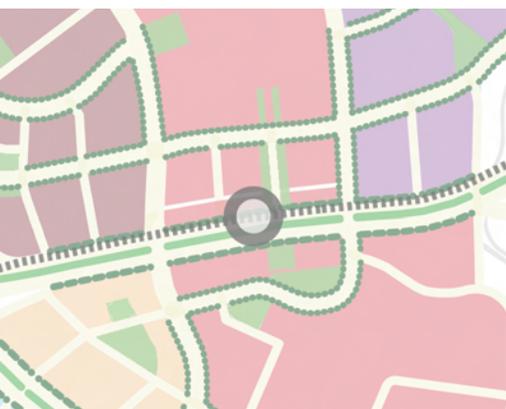
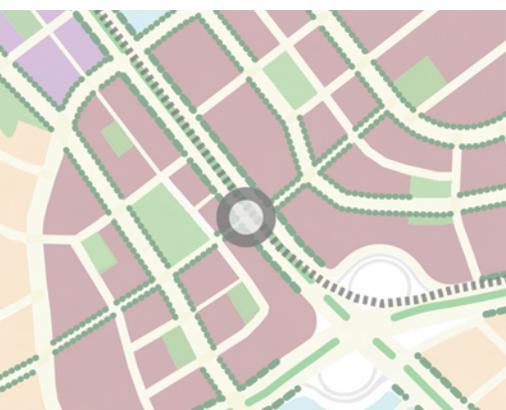
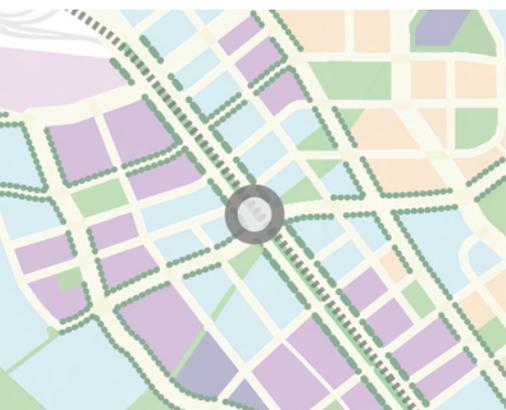
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- Relocation and expansion of the existing Tysons fire station (Station 29) to Jones Branch Drive.
- A new fire station in the vicinity of Old Meadow and Chain Bridge Road.
- A new fire station in the vicinity of International Drive and Chain Bridge Road.
- A new police station in the Merrifield/Dunn Loring area.
- A new small, satellite police office in the urban core of Tysons to support foot and bike patrols.
- 61 new elementary classrooms (almost two new elementary schools).
- A full service community library, including a public meeting room, ideally near the Tysons Central 123 or Tysons Central 7 districts.
- Implementation of stormwater management strategies to reduce stormwater runoff.
- Additional water supply and treatment facilities.
- New strategies and facilities to manage wastewater.



Tysons West looking from Metrorail north on Spring Hill Road

Prototype A: Development Program	
Total Square Footage	96,277,500
Non-residential Square Footage	52,760,000
Residential Square Footage	43,517,500
Land Use Mix	55% employment / 45% residential
Net New Development in the TODs	87%
Net New Development outside the TODs	13%
Total Development in the TODs	73%
Total Development outside the TODs	27%
Percent increase from 2006	117%
Jobs	159,000
Dwelling Units	36,000
Residents	72,000
Acres of Urban Park Land Needed*	125
Acres of Urban Park Land Provided	55

*Based on Fairfax County Park Authority draft urban standards



7. ADVANCED PROTOTYPE B

Prototype B incorporates an enhanced transit network with a form-shaping circulator. Rather than focus development primarily around the Metrorail stations, Prototype B includes TOD (mostly residential) along the transit circulator. Providing for additional square footage along the transit circulator distributes future development more widely across Tysons and consequently gives more people access to transit.

All of the new employment development is within the TOD areas. 65% of the residential development is located within TODs. Prototype B has a total of 127 million square feet of development - almost 190% more than in 2006, and 32% more than Prototype A. 203,000 jobs and 100,000 residents would result from Prototype B and provide a stronger residential base than currently exists in Tysons and a similar land use mix to Prototype A.

The unique characteristics of Prototype B include:

- High intensity development focused within a five minute walk of the four Metrorail stations and the circulators. This gives the Dulles Rail project increased ridership benefits achieved from intense development around transit.
- Much more residential development than currently exists, or would result from the Base Case or under Prototype A.
- Overall employment similar in scale to downtown Philadelphia or approximately the 5th largest US downtown.
- Tiered intensity of development from the greatest densities at the transit stations, more moderate densities around the circulators and the lowest densities near the edge.
- A series of enhanced urban parks and greenways throughout Tysons.
- Complete streets that lead from the station areas and the circulator to the surrounding neighborhoods.
- A reduction in the proportion of office uses in the non-TOD areas compared to the Base Case and Prototype A.

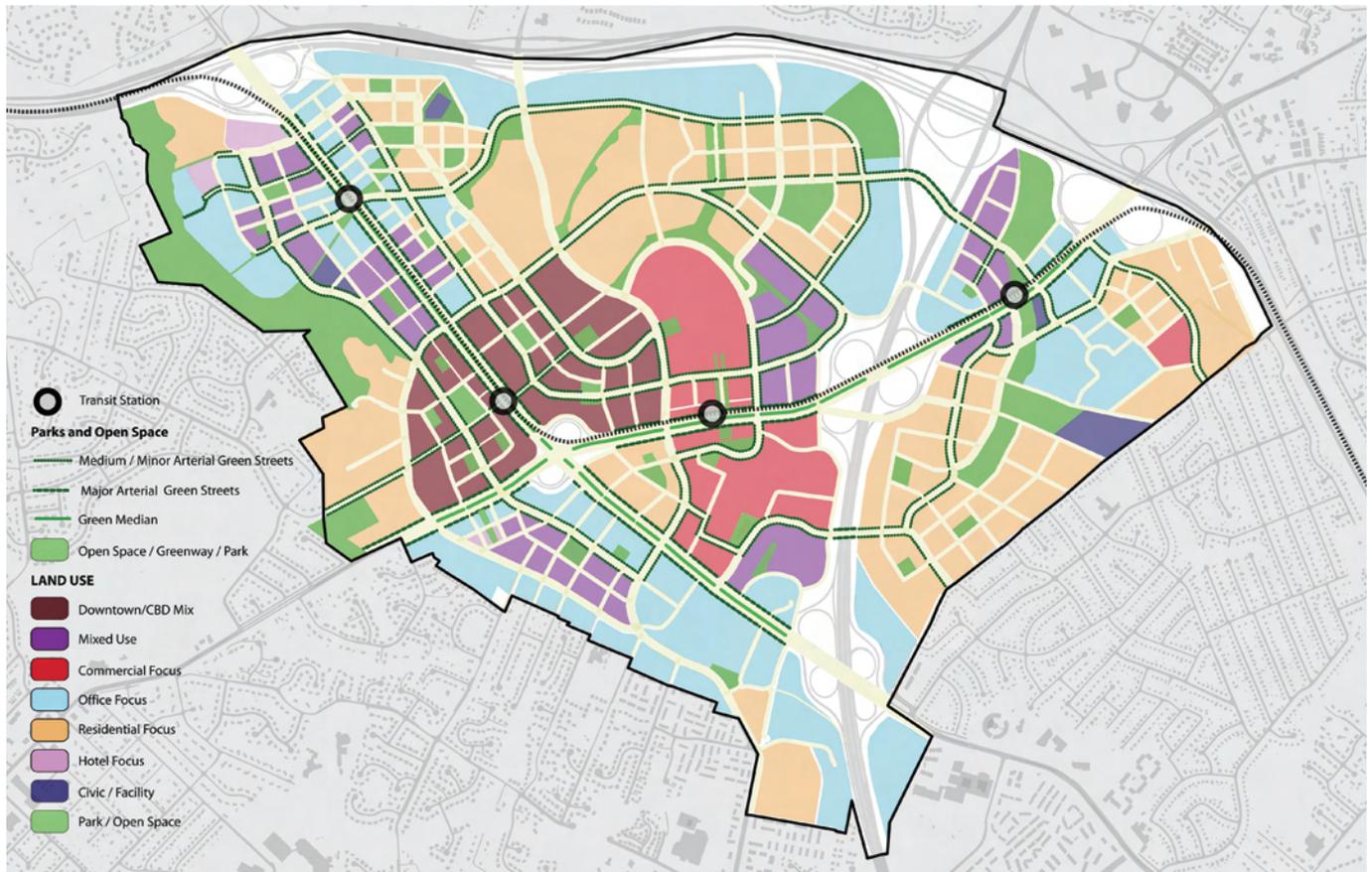
Land Use Mix

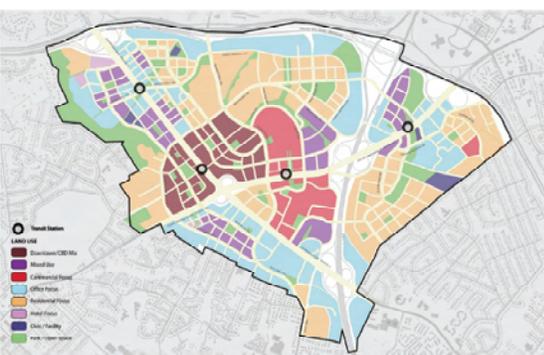
- 62% of net new square feet of development is residential and 38% is non-residential.
- In Prototype B, the jobs-housing ratio is 4.1:1, as compared to 9.2:1 for the Base Case and 4.4:1 for Prototype A. This improved jobs housing balance can:
 - Increase transit ridership both to and from other major centers along the Metrorail system;
 - Support an 18-hour atmosphere and amenities that a live-work-play community includes; and
 - Increase the number of people walking, biking or taking transit between work and home.

Intensity

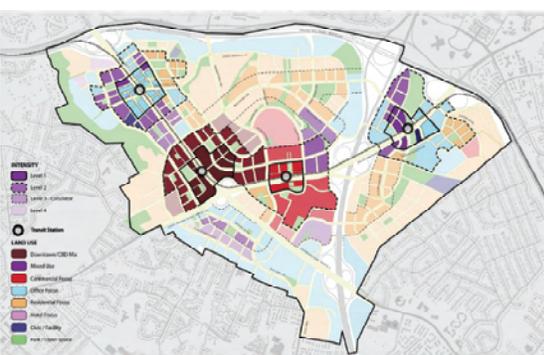
- TODs around the stations capture 70% of the total development in Tysons.
- An additional 17% of total development is primarily within walking distance of a circulator route.
- Development on the edge of Tysons is limited, at approximately the same intensities and square footage as would occur under the Base Case.
- Density is the highest at the station areas. The next highest level of density is within 600 feet of the circulator.

▼ **LAND USE, PARKS AND OPEN SPACE NETWORK**

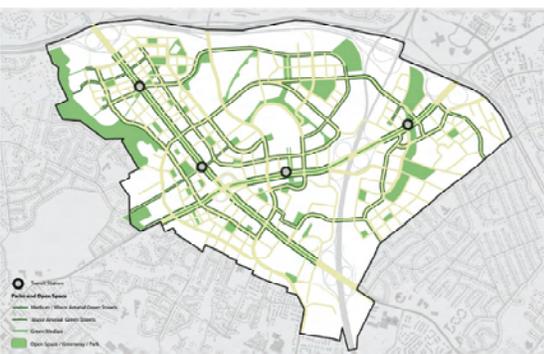




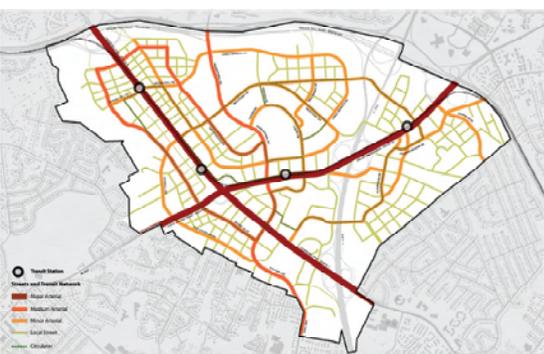
▲ Land Use



▲ Intensity



▲ Parks and Open Space



▲ Circulation

Parks and Open Space

- Increased amount of urban park land (89 acres) consistent with the increased jobs and residents proposed in Prototype B.
- A new 3.5 acre urban park is a central feature of the Tysons 7 station area.
- A new 8 to 10 acre urban park is a central feature of the northern portion of Tysons, which is served by the circulator
- Other urban parks are near the other stations and circulator route and on green boulevards between the stations.
- 170 acres of park land are needed based on Fairfax County Park Authority draft urban park standards.

Transportation

- 16,200 households and 111,200 jobs are in the Metrorail station areas.
- 23,400 households and 58,400 jobs are in the areas served by the circulator.
- Under Transportation Network 2, the circulators move on their own right of way.
- Because 35% of the household and 24% of the jobs are within an easy walk of the circulator, the circulator is able to increase daily transit ridership by 14%.
- TDM strategies reduce auto trips by up to 10.4% in the station areas.
- With design for complete streets, the circulator and TDM, the mode split for daily work trips (to/from residences) is 51% single occupancy vehicles, 26% transit, and 23% other. This is consistent with Prototype A.
- For non-work trips, most trips are by single occupancy vehicle.
- Regardless of the transportation network, congestion is similar to the Base Case.
 - Under Prototype B, 10% - 11% of the AM trips, 38% - 29% of the PM trips, and 18%-19% of the off-peak trips are under highly congested conditions, depending on the network tested.

Urban Design

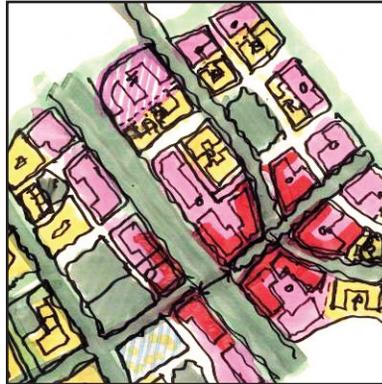
- Connects separate areas in Tysons with the circulator and creates a TOD environment around the circulator.
- Uses parks, green streets and public gathering spaces to create a diverse and attractive public realm.
- Enhanced street grid provides a pedestrian environment throughout Tysons.

Public Facility Needs

- A new electric substation, south of the intersection of Route 7 and Spring Hill Road, adjacent to the existing transmission line.
- Relocation and expansion of the existing Tysons fire station (Station 29) to Jones Branch Drive.
- A new fire station in the vicinity of Old Meadow and Chain Bridge Road.
- A new fire station in the vicinity of International Drive and Chain Bridge Road.
- A new police station in the Merrifield/Dunn Loring area.
- A new small, satellite police office in the urban core of Tysons to support foot and bike patrols.
- 86 new elementary classrooms (for a total of 2.5 elementary schools).
- A full service community library, including a public meeting room, ideally near Tysons Central 123 or Tysons Central 7.
- Implementation of stormwater management strategies to reduce stormwater runoff.
- Additional water supply and treatment facilities.
- New strategies and facilities to manage wastewater.

Prototype B: Development Program	
Total Square Footage	127,498,500
Non-residential Square Footage	67,534,000
Residential Square Footage	59,964,000
Land Use Mix	53% employment / 47% residential
Net New Development in the TODs	77%
Net New Development outside the TODs	23%
Total Development in the TODs	70%
Total Development outside the TODs but near a circulator	17%
Total Development outside the TODs and circulator areas	13%
Percent increase from 2006	187%
Jobs	203,000
Dwelling Units	50,000
Residents	99,500
Acres of Urban Park Land Needed	170
Acres of Urban Park Land Provided	89

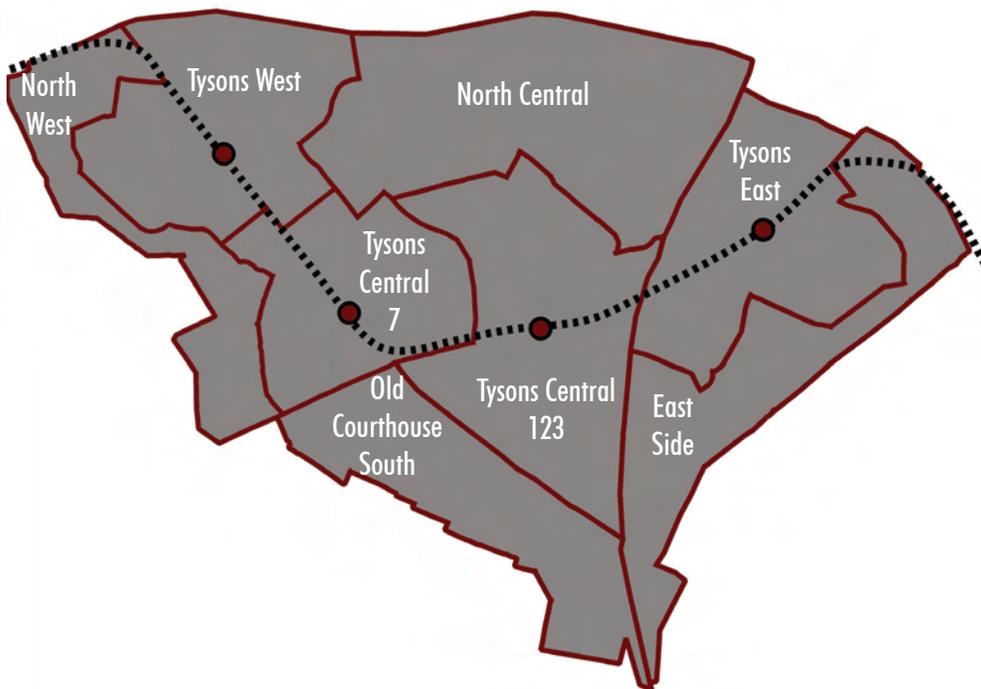
**Based on Fairfax County Park Authority draft urban standards*



8. COMPARISON OF DEVELOPMENT PROGRAMS

Comparison of Development Programs			
	Base Case	Prototype A	Prototype B
Total Square Footage	74,328,000	96,277,500	127,498,500
Non-residential Square Footage	52,998,000	52,760,000	67,534,000
Residential Square Footage	21,330,000	43,517,500	59,964,000
Land Use Mix	71% employment / 29% residential	55% employment / 45% residential	53% employment / 47% residential
Jobs per Household	9.2	4.4	4.1
Net New Development in the TODs	80%	87%	77%
Net New Development outside the TODs	20%	13%	23%
Total Development in the TODs	66%	73%	70%
Total Development outside the TODs	34%	27%	30%
Percent Change from 2006	67%	117%	187%
Jobs	161,500	159,000	203,000
Dwelling Units	17,500	36,102	50,000
Residents	35,000	72,000	99,500
Acres of Urban Park Land Needed*	65	125	170
Acres of Urban Park Land Provided	unknown	55	89

*Note: Acreage based Park Authority staff's draft urban park standards; under these standards some parks needs may be accounted for in private open space and private recreation uses.



9. TYSONS DISTRICTS

Every metropolitan city has one downtown, but each downtown is made up of many places, each a part of the larger whole but each also a unique place with its own distinct personality. Tysons is no different. Tysons has eight places, or districts, that serve different functions. They are places to work, to live, to shop and to play.

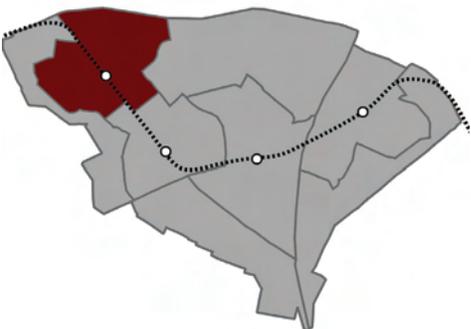
All of these different places are equally important to Tysons' success. The TODs around the transit stations are no more important than the districts on the edge of Tysons – the TODs are just bigger. Just like the rooms in a house, each of the TODs and the edge areas serve specific functions. People who live and work in Tysons will use all of these places, but not at the same time. Just like a house, each district is connected to the others and the boundaries between the districts are blurred as people move seamlessly from one place to the next. The connectedness and uniqueness of each place feed off of each other and make Tysons an 18-hour place of great vitality.

Tysons' eight districts fall into two categories:

- **Transit-oriented developments (TODs)** – the four station areas of Tysons West, Tysons Central 7, Tysons Central 123 and Tysons East; and
- **Non-TOD areas** – the districts of North West, Old Courthouse South, East Side and North Central that abut the communities next to Tysons.

The following pages describe each of the eight districts, how they connect to the other districts in Tysons, and the different futures in Prototypes A and B for those districts that include the circulator.

transit-oriented development



Tysons West

Tysons West is a gateway to Tysons and is the optimum location for an arts and entertainment district. As you enter Tysons West, you sense a vibrant urban destination. The redevelopment of Tysons West as a mix of office, residential, hotel and retail uses provides an opportunity to shape an arts and entertainment district focusing on popular attractions often found in more established downtowns.

On the south side of Route 7, the focus on arts and entertainment includes restaurants, private galleries, small theatres, specialty retail and café/club/bars, and live/work and loft housing. These ingredients give this part of the station area a trendy nightlife-rich identity. North of Route 7, a specialty retail street, located east of the station, brings together office uses and an urban residential neighborhood. Residential units have inviting street level facades and architectural details along mature, tree-lined streets. A series of urban park spaces provides attractive neighborhood gathering and strolling places for people of all ages.

Moving out from the station, lower intensity development in Tysons West provides a transition to the surrounding areas, such as the Old Courthouse Spring Branch in the North West district and the residential and hotel uses on the north side of Route 7, adjacent to the North Central district.

On the south end of the district, there are more office buildings and the area has a strong business environment. People move easily back and forth between the Tysons Central 7 and Tysons West districts and can access both transit stations and the supporting services located at the ground floor of the office buildings.

Tysons West Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	255	255	255
Total Square Footage	11,697,000	18,208,500	24,151,000
Non-residential Square Footage	8,093,500	9,394,500	13,673,500
Residential Square Footage	3,603,000	8,814,000	10,477,500
Land Use Mix	69% emp. 31% res.	52% emp. 48% res.	57% emp. 43% res.
Jobs	24,500	28,000	41,000
Residents	6,000	14,500	17,500
% of Tysons jobs in District	15%	18%	20%
% of Tysons housing in District	17%	20%	17%
Jobs per Household	8.2	3.8	4.7

District Key Characteristics

- To complement the other districts in Tysons, Tysons West is a key entertainment destination and a prime example of an 18-hour place with restaurants and entertainment open after the workday ends.
- Tysons West can be a signature gateway for all of Tysons.
- Streets leading to and from the transit station are specialty retail streets. These streets draw people off Metrorail and into the neighborhoods to shop, play and live.
- A series of small urban parks extend north of Route 7 from the transit station to the residential neighborhoods on the edge of the district.
- In Prototype B, Route 7 becomes a green boulevard with street trees, slowed traffic and a more pedestrian friendly environment.
- In Prototype B, more land is designated mixed-use than in Prototype A to create a greater amount of TOD adjacent to the circulator. This results in a higher concentration of employment in Prototype B.

▼ **TYSONS WEST PROTOTYPE A**



▼ **TYSONS WEST PROTOTYPE B**



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

transit-oriented development

Tysons Central 7

The Tysons Central 7 district consists of two subdistricts divided by Route 7: a vibrant 18-hour downtown Central Business District and a Civic Center full of activity. Along Route 7, a transformed streetscape has become a wide landscaped boulevard lined with high-rise office buildings. This redesign results in a calming of traffic through this downtown area while still maintaining the capacity of Route 7.

The Central Business District subdistrict of Tysons Central 7 adds new high-rise office buildings to appeal to tenants who desire identity headquarter buildings for a strong corporate profile. These buildings are the tallest in all of Tysons.

The signature piece of the Civic Center subdistrict that draws people to the heart of Tysons is a great public square that is the primary civic gathering place for Tysons. The public square creates a new identity and setting for community events and celebrations in Tysons. New public buildings of significant architectural design – government services, public library, post office, and/or cultural facility – bring civic presence, frame terminal views and shape positive urban spaces brought to life by the overflow of a bustling public market, bookshops, restaurants and programmed outdoor events and street life.

Extending west to the Northwest District, urban residential neighborhoods are distinguished by calm, dignified squares linked together by tree-lined avenues with cycling, promenade and sitting spaces. Residential blocks with walk-up residential units provide underground parking and clear gradations of public, semi-public and private space.



Tysons Central 7 Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	178	178	178
Total Square Footage	12,344,000	18,414,500	21,104,500
Non-residential Square Footage	10,110,500	8,768,000	11,821,500
Residential Square Footage	2,233,500	9,646,500	9,283,000
Land Use Mix	82% emp. 18% res.	48% emp. 52% res.	56% emp. 44% res.
Jobs	32,000	27,500	37,000
Residents	3,500	16,000	7,500
% of Tysons jobs in District	19%	17%	18%
% of Tysons housing in District	10%	22%	15%
Jobs per Household	17.1	3.4	4.8

District Key Characteristics

- The Central Business District has the greatest office concentration in Tysons with taller buildings.
- The Civic Center subdistrict provides a central location in Tysons for government services, such as a library or post office.
- A 3.5 acre park is the great public square and gathering place for Tysons. With easy access to transit, the square is the primary location within Tysons for staging public events such as outdoor concerts or public markets.
- Even though this is the business core of Tysons, this district has much housing added, especially west of the station.
- The streets leading to and from Tysons Central 7 are pedestrian streets, encouraging people to walk and leading people to the Civic Center and the Central Business District.
- In Prototype B, more of the land is designated as the Central Business District to support the circulators, leading to a greater concentration of employment (56% employment and 44% residential) compared to Prototype A (48% employment and 52% residential).

▼ **TYSONS CENTRAL 7 PROTOTYPE A**



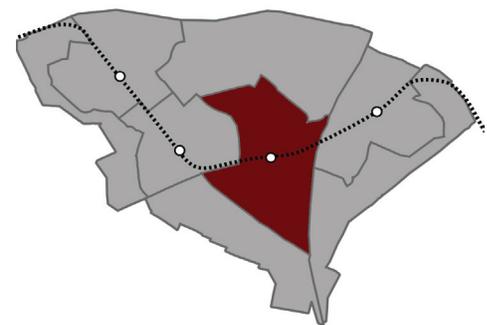
▼ **TYSONS CENTRAL 7 PROTOTYPE B**



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

transit-oriented development



Tysons Central 123

Tysons Central 123 remains the region’s signature shopping destination by building upon the strength of the existing regional retail offerings and bringing street front, ground floor retail and entertainment to the Metro station area.

Parking is shared by numerous businesses in centrally located parking structures with some short-term parking provided on-street. A unique element in Tysons Central 123 is the parking structure built into the side of the hill between Tysons Boulevard and West Park Drive. Rather than disrupt the district’s character or act as a barrier to connectivity, this topographical change in grade was seen as an opportunity and incorporated into the overall development pattern.

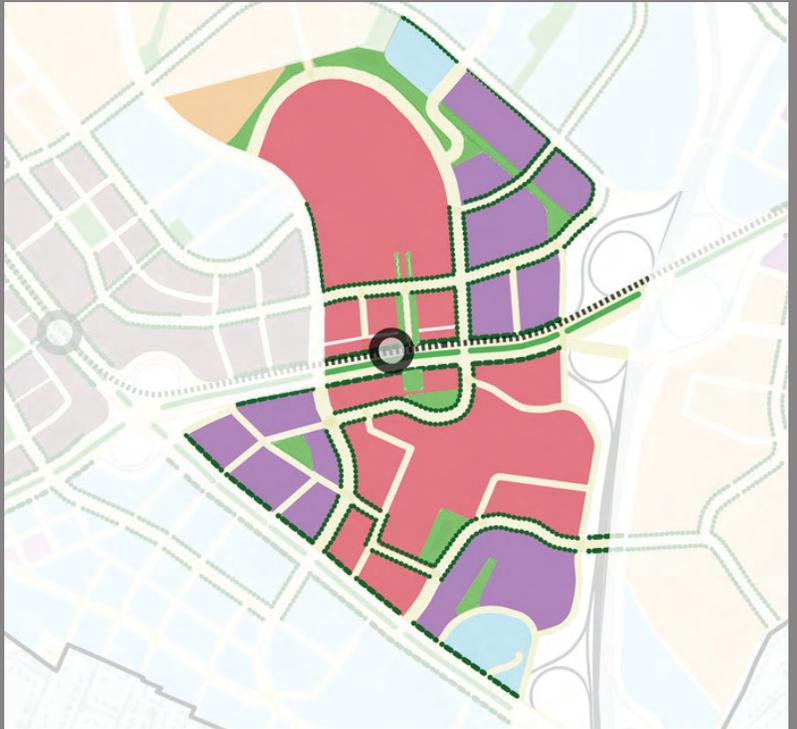
As part of this downtown retail district, mixed-use high-rise hotel and conference facilities offer space for exhibitions and conferences, with immediate walking access to regional retail and quick links to the downtown central business district. High-end luxury condominiums are often combined with these facilities and benefit from available hotel services.

Tysons Central 123 Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	243	243	243
Total Square Footage	17,248,000	19,100,500	25,496,000
Non-residential Square Footage	14,371,500	13,795,500	17,705,500
Residential Square Footage	2,876,000	5,305,000	7,790,500
Land Use Mix	83% emp. 17% res.	72% emp. 28% res.	69% emp. 31% res.
Jobs	40,500	37,500	50,000
Residents	5,000	9,000	13,000
% of Tysons jobs in District	27%	26%	26%
% of Tysons housing in District	13%	12%	13%
Jobs per Household	16.9	8.5	7.7

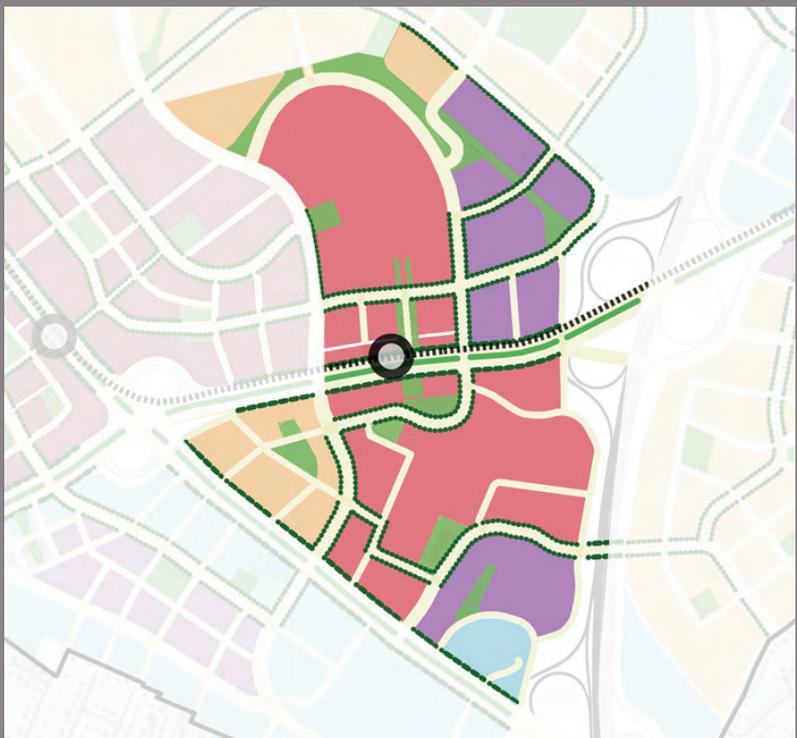
District Key Characteristics

- Tysons Central 123 remains the regional shopping destination for Northern Virginia.
- A striking contrast with earlier conditions is the district’s more pedestrian friendly, walkable street network that is lined with active storefronts and interesting streetscapes.
- Hotel and conference facilities complement the retail node at the station and benefit from proximity to Central Business District at Tysons Central 7.
- Marked connectivity and safety improvements facilitate walkability around the station and to and from the malls and nearby businesses.
- Tysons Central 123 is employment-rich, with almost two-thirds of the land being designated as employment.
- Tysons Central 123 has half of all of Tyson’s retail floor area.
- The primary difference between Prototype A and Prototype B is the amount of overall square feet of development. No changes were made to the type of land uses or ratio of jobs to households for Tysons Central 123.

▼ **TYSONS CENTRAL 123 PROTOTYPE A**



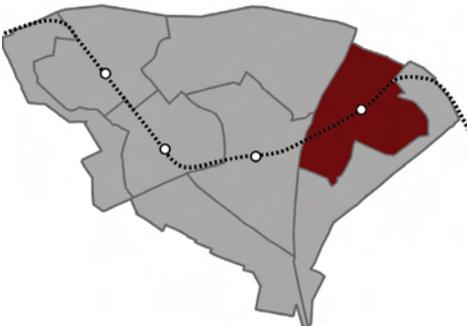
▼ **TYSONS CENTRAL 123 PROTOTYPE B**



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

transit-oriented development



Tysons East

The focus of Tysons East is a great urban park surrounded by mixed-use office, residential and educational facilities. Tysons East includes three subdistricts: an office district, a residential district and a focused educational district.

The office subdistrict is immediate to the station. The residential district extends to the northeast and to the south-southeast of the station. Educational facilities essential to attracting creative class families are located along Scotts Run, as are professional education, recreational health and sports amenities.

Scotts Run is the central feature of an urban park that embraces a variety of landscapes from woody hills, meadows and ponds that allow people to relax, enjoy summer music in the park and participate in active recreation. Intimate gardens with shady places of retreat provide relief and gathering places for families and office workers.

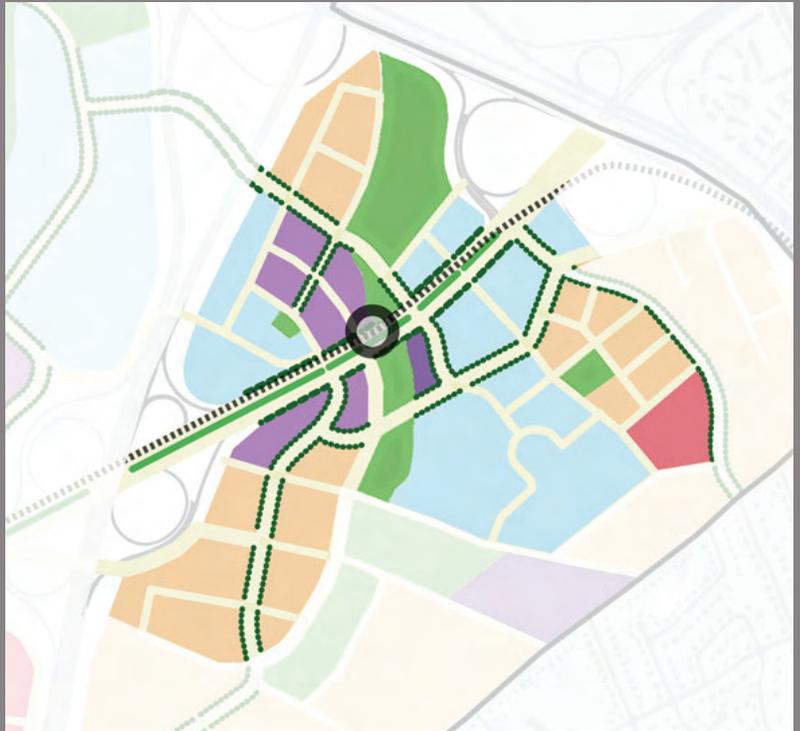
Tysons East includes extensive residential development. These urban residential neighborhoods feature lively neighborhood shopping streets with local-serving goods and services - grocery, bookstore, music stores, culinary, video stores, ethnic eating and drinking places. The neighborhoods supply a diversity of housing choices including affordable and family housing on safe, narrow, tree-lined streets with views terminating in open spaces and parks. The Commons apartments are linked to the station by the enhanced street network.

Tysons East Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	165	165	165
Total Square Footage	7,617,500	14,252,500	18,559,500
Non-residential Square Footage	6,299,000	7,418,000	12,173,500
Residential Square Footage	1,319,000	6,834,500	6,386,000
Land Use Mix	83% emp. 17% res.	52% emp. 48% res.	66% emp. 34% res.
Jobs	20,000	24,000	39,000
Residents	2,000	11,500	10,500
% of Tysons jobs in District	12%	14%	18%
% of Tysons housing in District	6%	16%	11%
Jobs per Household	18.4	4.2	7.3

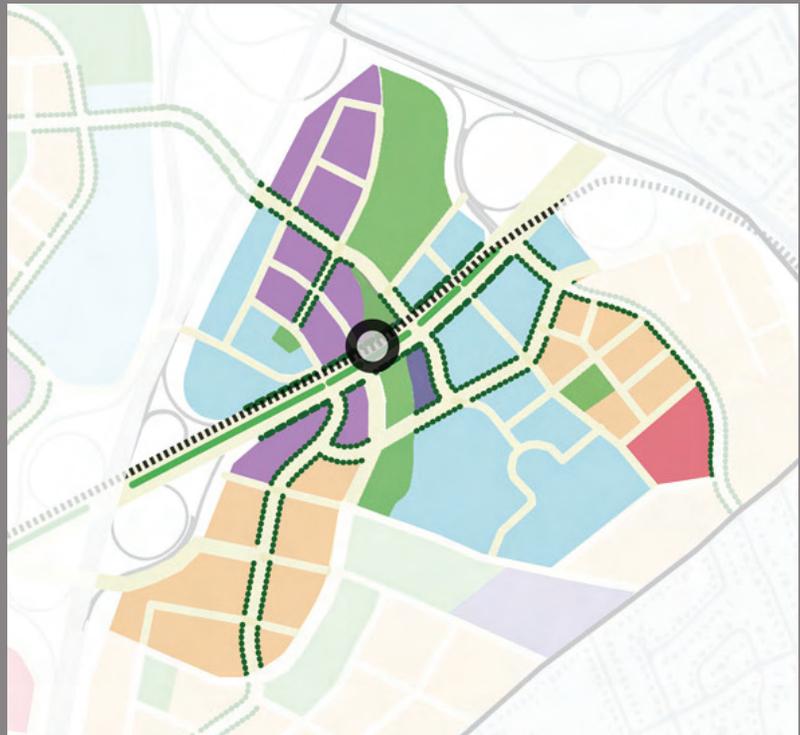
District Key Characteristics

- Scotts Run is a great urban park, with trails and passive areas, as well as a concert lawn.
- Employment is primarily office uses, education and research development.
- The district includes an office subdistrict immediately around the station, and a residential subdistrict extending out to the east and south of the station.
- More housing is added to create a greater mix of uses.
- In Prototype B, more land is designated mixed-use than in Prototype A in order to create TOD adjacent to the circulator. This results in a greater concentration of employment, increasing the amount of employment in this district by approximately 62%.

▼ **TYSONS EAST PROTOTYPE A**



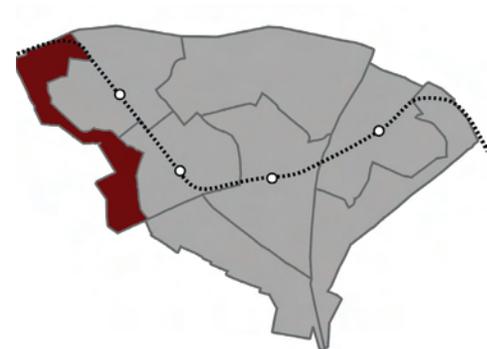
▼ **TYSONS EAST PROTOTYPE B**



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

non-TOD district



Source: US Library of Congress / Historic American Engineering Record via Wikimedia Commons

North West

The North West district is a residential neighborhood with the Old Courthouse Spring Branch stream valley park as a key feature. Located on the edge of Tysons West and Tysons Central 7, the North West district is a transition from the higher density mixed-use of the nearby TOD districts to lower density land uses in the neighborhoods just outside of Tysons. The residential character of the North West district is similar to that of today with multi-family housing, including housing for seniors. The Old Courthouse Spring Branch stream valley park is now more of an urban park with active recreational facilities and pedestrian pleasures. Tree-lined streets leading to the park serve a diverse social and economic mix of housing, including housing for families.

	Development Program		
	Base Case	Prototype A	Prototype B
Total Acres	109	109	109
Total Square Footage	1,240,500	1,240,500	1,240,500
Non-residential Square Footage	2,000	2,000	2,000
Residential Square Footage	1,238,500	1,238,500	1,238,500
Land Use Mix	0% emp. 100% res.	0% emp. 100% res.	0% emp. 100% res.
Jobs	5	5	5
Residents	1,500	1,500	1,500
% of Tysons jobs in District	0%	0%	0%
% of Tysons housing in District	6%	3%	2%
Jobs per Household	0	0	0

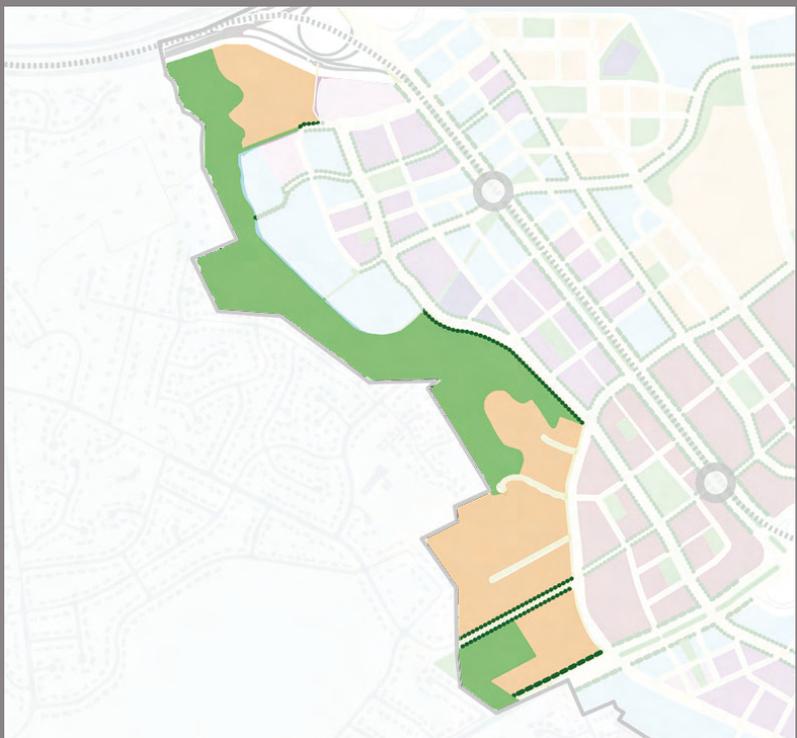
District Key Characteristics

- More than half of the land in this district is park land. Originally a greenway, Old Courthouse Spring Branch stream valley park has been enhanced with trails and other passive recreation uses.
- Approximately 870 homes are located in the North West district. The housing is primarily multi-family, with some housing catering to Tysons’ senior population.
- North West provides a buffer between the lower density neighborhoods adjacent to Tysons and the higher density of the TOD areas within Tysons.
- Green streets connections tie the Tysons West station to the North West district, drawing people to the largest natural feature in Tysons.
- There are no differences between Prototypes A and B regarding the development program or characteristics of the North West district, primarily because more than half of this district is natural park land.

▼ **NORTH WEST PROTOTYPE A**



▼ **NORTH WEST PROTOTYPE B**



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

non-TOD district

Old Courthouse South

Old Courthouse South has two very distinct possible futures:

- An employment center; or
- A mixed-use neighborhood village that includes residential and employment.

Located on the edge of Tysons, nestled primarily between Route 7 and Old Courthouse Road, the Old Courthouse South district has smaller scale office buildings and residential developments than the TOD districts and is a transition area between Tysons Central 123 and the communities.

In Prototype A, Old Courthouse is largely an office environment. The restaurants and service storefronts, such as the bank, conduct most of their business during the work day and close when the workday ends. For the few residents that live in the area, there are limited local-serving businesses, such as a grocery store or drycleaner, which support their daily needs.

Prototype B envisions a neighborhood village that is a more active 18 hours-a-day place. When the work day ends, office workers go home but the residents of Old Courthouse return supporting local restaurants and other neighborhood service businesses. Residential development dominates the heart of the district and the sense of community is strong as people run into their neighbors at local places such as the corner grocery store.



Old Courthouse South Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	181	181	1811
Total Square Footage	6,987,500	6,843,500	9,354,500
Non-residential Square Footage	6,297,500	5,740,000	4,778,000
Residential Square Footage	689,500	1,103,000	4,576,500
Land Use Mix	90% emp. 10% res.	84% emp. 16% res.	51% emp. 49% res.
Jobs	20,000	18,000	14,000
Residents	1,000	2,000	7,500
% of Tysons jobs in District	12%	11%	7%
% of Tysons housing in District	3%	3%	8%
Jobs per Household	35.0	19.6	3.7

District Key Characteristics

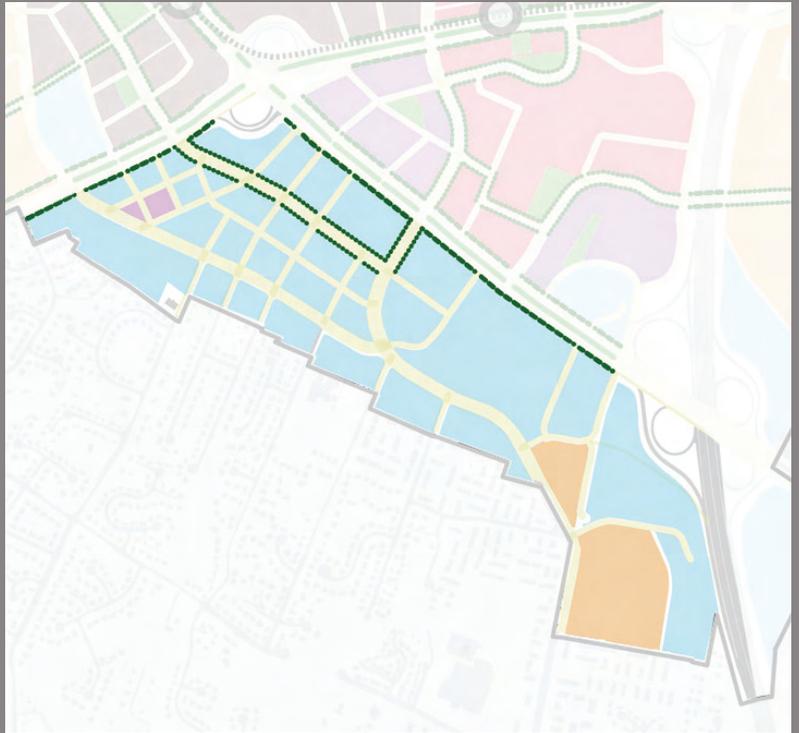
Prototype A

- With 84% of the development being employment uses, Old Courthouse South is similar in character to what it would be under the Base Case.
- As an employment center, there is little activity after the workday ends.
- The relatively low intensity of development provides a transition between the TOD at the Tysons Central 7 and Central 123 stations and the adjacent communities outside Tysons.
- Urban parks are limited to green streets and a few pocket parks.
- The circulator runs through Old Courthouse South and connects the district with the rest of Tysons.
- The local street network facilitates walking or biking within the District.

Prototype B

- Old Courthouse South – 51% employment uses and 49% residential uses – is now a true neighborhood village with more residential uses and fewer office developments than Prototype A.
- This shift in land uses support an active 18-hour neighborhood where people can go to restaurants or shopping after work.
- The shift from office under Prototype A to mixed-use under Prototype B occurs primarily along the circulator route with development at a higher intensity (FARs between 2.0 and 2.5).
- Because of the increased intensity of uses along the circulator under Prototype B, more people have access to the circulator. The local street network is the same as it is under Prototype A.
- Urban parks continue to be limited under Prototype B, but a few additional pocket parks provide gathering places within the mixed-use area.

OLD COURTHOUSE SOUTH PROTOTYPE A



OLD COURTHOUSE SOUTH PROTOTYPE B

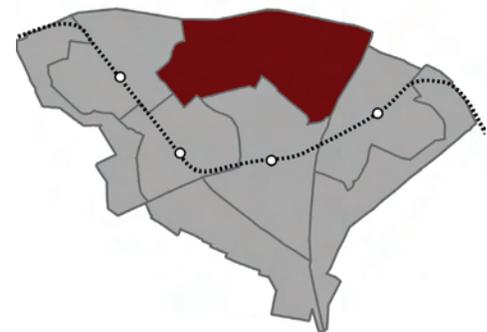


LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

North Central

non-TOD district



North Central has two possible futures:

- An commercial office center; or
- A mixed-use residential neighborhood.

Located primarily between West Park Drive and the Dulles Access Road, North Central is a transition area between Tysons Central 123 and the adjacent community north of Tysons (with the Dulles Access Road as an additional buffering element).

The two visions for North Central emerge out of the role of the circulator, which runs through the center of the district.

Prototype A envisions North Central as more of a commercial office park, with a superblock road network, low density and limited local serving retail. The restaurants and service storefronts, such as the bank, conduct most of their business during the work day and close when the workday ends. For the residents that live in the area, there are few businesses such as a grocery store or dry cleaner that support their daily needs. The circulator serves as a connector to the other parts of Tysons and the Metrorail stations, bringing employees to and from work. For Prototype A, the circulator does not enhance the livability of the place.

Prototype B envisions the district as more of a vibrant, mixed-use residential neighborhood, with local-serving retail, dedicated parks and civic uses, and a pedestrian friendly street network. New pedestrian friendly main streets with ground floor retail enhance the connectivity in the North Central district. The main streets, along with a finer grid of streets and a linear park green network, lead people to the circulator and encourage them to walk.

As the central feature of the district, the circulator in Prototype B provides form to the district's development whose mixed-use characteristics create the opportunity for an 18-hour day environment. Residential development is located throughout the district and the sense of community is strong as people run into their neighbors at the corner grocery store.

Several parks in North Central provide many gathering places for the residents, and provide a link between Tysons Central 123 and the office employment on the edge of Tysons, adjacent to the Dulles Access Road.

North Central Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	289	289	289
Total Square Footage	11,295,000	11,353,000	17,280,500
Non-residential Square Footage	6,279,000	6,337,000	5,732,500
Residential Square Footage	5,016,000	5,016,000	11,548,000
Land Use Mix	56% emp. 44% res.	56% emp. 44% res.	33% emp. 67% res.
Jobs	20,000	20,500	17,500
Residents	8,500	8,500	19,000
% of Tysons jobs in District	12%	12%	8%
% of Tysons housing in District	24%	12%	19%
Jobs per Household	4.8	4.9	1.8

Key Characteristics

Prototype A

- With 56% of its development being employment uses, North Central is similar in character to what it would be under the Base Case.
- The character of the area leads to little activity after the workday ends.
- The intensity of development is lower than most other parts of Tysons, providing a transition between the TOD at Tysons Central 123 station and the adjacent communities north of Tysons.
- The circulator connects North Central to the rest of Tysons.

Prototype B

- North Central is a true neighborhood village with more residential uses and fewer office developments than Prototype A.
- The ratio of jobs to housing is greatly reduced from Prototype A. The mix of uses under Prototype B is 33% employment and 67% residential.
- The shift in land uses supports an active 18-hour neighborhood where people can go to restaurants or shopping after work.
- Development along the circulator route, with FARs ranging from 2.0 to 2.5, is at a higher intensity than in Prototype A.
- Because of Prototype B's increased intensity of uses along the circulator, more people have direct access to the circulator than under Prototype A.
- A new 8 to 10 acre urban park is a central feature of the northern portion of Tysons, which is served by the circulator
- Urban parks expand under Prototype B to include a green network leading from Tysons Central 123 to the employment area adjacent to the Dulles Access Road and a larger park along the circulator.

▼ NORTH CENTRAL PROTOTYPE A



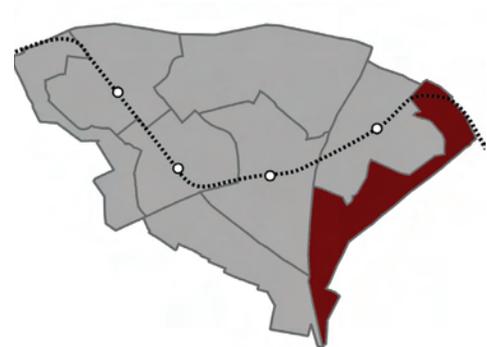
▼ NORTH CENTRAL PROTOTYPE B



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space

non-TOD district



East Side

The East Side district is primarily a residential district located on the edge of Tysons, to the east and south of the Tysons East station district. As an “edge district,” it is a transition area between the higher density stations in the core of Tysons and the adjacent neighborhoods outside Tysons.

The East Side is a large residential neighborhood, with corner grocery stores to which children can ride their bikes after school or where adults can stop to get a gallon of milk on their way home from work. This district includes only limited retail and office uses, primarily to support the local residential population or to provide Tysons with some live-work opportunities.

The tree-lined residential streets through the East Side neighborhoods serve a diverse social and economic mix of housing. The street network, particularly under Prototype B, is a finely scaled grid of streets that encourages walking and biking. The character of the district is of a peaceful, friendly community where neighbors gather on the street or in one of the many pocket parks to socialize.

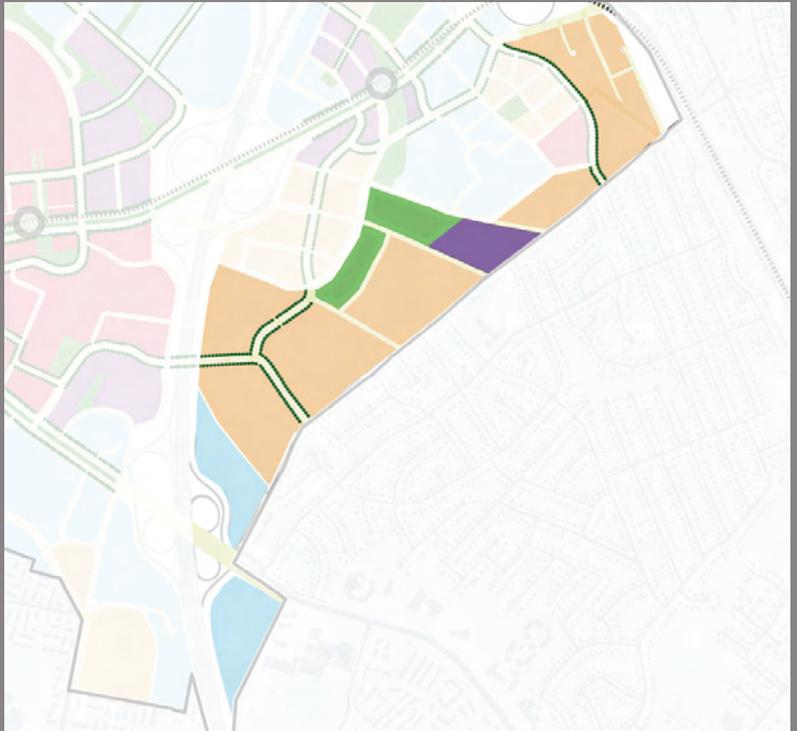


East Side Development Program			
	Base Case	Prototype A	Prototype B
Total Acres	232	232	232
Total Square Footage	5,898,000	6,864,500	10,311,500
Non-residential Square Footage	1,544,000	1,305,000	1,647,000
Residential Square Footage	4,354,000	5,559,500	8,664,500
Land Use Mix	29% emp. 71% res.	19% emp. 81% res.	16% emp. 84% res.
Jobs	4,500	3,500	4,500
Residents	7,500	9,500	14,500
% of Tysons jobs in District	3%	2%	2%
% of Tysons housing in District	20%	13%	14%
Jobs per Household	1.2	0.7	0.6

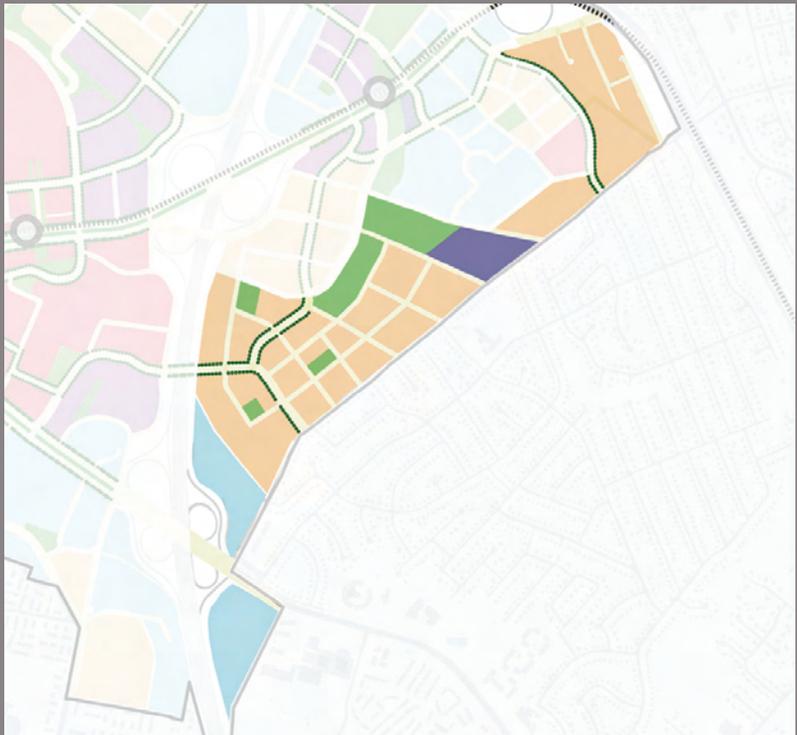
District Key Characteristics

- With more than 80% of its development residential, in both Prototypes, the East Side is first and foremost a neighborhood for Tysons.
- The land uses between Prototypes A and B do not change. The only change is the degree of development intensity in the vicinity of the circulator under Prototype B.
- Pocket parks are located throughout the district to support the residential focus.
- As an edge to Tysons, East Side is lower in density than most other parts of Tysons.
- In Prototype B, connections to stations are provided by the transit circulator, walking paths and finer grid of streets.

▼ EAST SIDE PROTOTYPE A



▼ EAST SIDE PROTOTYPE B



LEGEND

	Downtown / CBD Mix		Residential Focus
	Mixed Use		Hotel Focus
	Commercial Focus		Civic / Facility
	Office Focus		Park / Open Space



10. DELIVERING THE VISION

Next Steps

Realization of the vision for Tysons will require strong partnerships. The three futures described (Base Case, Prototype A and Prototype B) are all viable options for delivering much of the vision for Tysons. The next step is to identify what is the best option. The answer may be one of the futures per se or a recommendation that includes elements of two or all of the futures.

After the workshops, the Consultant Team will work with the Task Force to identify which elements should be in the Preferred Future and create a Preferred Future that the Task Force can recommend to the Board of Supervisors. Comments received at the public workshops and via the website will inform the Task Force recommendations.

Implementation

The new vision for Tysons Corner is a big vision and a big opportunity to make Tysons a better place to live, work and play. This work to transform suburbia as represented by America's first edge city into a truly urban place is of great national significance. Realizing this opportunity, however, implies changes in the planning, financing and perhaps governance of Tysons Corner as it is today.

To deliver the vision for Tysons requires new approaches and new tools. Implementation of the plan that is eventually adopted is the most complex component of Tysons future. Effective implementation will require a high degree of cooperation and coordination among landowners, employers, employees, residents of Tysons Corner and the surrounding communities as well as Fairfax County and the Commonwealth of Virginia. Furthermore, redevelopment of such magnitude will require large-scale infrastructure improvements and public-private partnerships.

The Tysons Land Use Task Force has identified several implementation strategies to move the Tysons vision forward. Based on the Task Force direction, the final Preferred Future will include the following implementation strategies:

1. Employ the preferred alternative to guide a comprehensive approach that informs and coordinates individual projects so the overall vision and goals for all of Tysons Corner will be achieved.
2. Create an implementing organization representing property owners and other stakeholders in Tysons Corner to insure the overarching vision, goals and objectives of the new Comprehensive Plan are implemented.
3. Update the Comprehensive Plan to incorporate the vision for Tysons and provide specific direction on the land uses and urban design elements necessary to create the vision.
4. Develop new zoning ordinance, urban standards and design guideline language that supports the vision for Tysons Corner.
5. Create a Design Review Committee to insure applications are integrated with surrounding properties and in accordance with design guidelines, the Comprehensive Plan, and zoning requirements.
6. Develop a phasing plan which thoughtfully links future entitlements for growth with the provision of community benefits and infrastructure improvements.
7. Set priorities for infrastructure improvements and community benefits on both a neighborhood and district basis.
8. Plan and implement initiatives related to public facilities, schools, parks, affordable housing, environmental enhancements, transportation, streetscapes, public safety, the physical environment and cultural events.
9. Use new methods of financing to help pay for necessary improvements and initiatives.
10. Use regulatory and financial incentives and programs to provide affordable and workforce housing units.
11. Implement transportation plan recommendations related to transportation management plans, transportation demand management, parking management, grid of streets, transit circulators, and pedestrian networks.

One of the key elements of implementation will be public-private partnerships. As Tysons grows, so will the need for community benefits, such as parks and other civic uses.

However, it should not be assumed that all community benefits are the sole responsibility of the public entities. Private entities should have an equal opportunity and responsibility to contribute to the development of the community benefits.



Tysons West looking from Metrorail north on Spring Hill Road

The new Tysons is designed to be livable. Regardless of where you are, pedestrian connections and frequent transit service make it easy to move around Tysons.



APPENDIX

- A. Land Use Menu
- B. Parks and Open Space Menu
- C. Street Sections
- D. Prototype and Base Case Numbers
- E. Transportation Network Details
- F. Public Facilities Report

A. Land Use Menu



Downtown/CBD – Includes elements and character of a downtown central business district, with a focus on office buildings and supporting retail and service uses.

Mixed Use – Includes a more balanced mix of commercial, office and residential uses that provide local residents with shopping and employment opportunities. The mix between employment and housing would be more in the 40% to 60% range.

Commercial Focus – Includes the existing retail core of Tysons. Primarily retail with supporting office and residential uses. The commercial component would likely be 85% to 90% of total development.



Office Focus – Primarily office with supporting retail and service uses, such as hotels and coffee shops. The office component would likely be 75% to 85% of total development.

Residential Focus – Primarily residential uses with supporting retail and service uses that provide for the residents' daily needs such as basic shopping and services, recreation, schools and community interaction. The residential component would likely be 75% to 85% of total development.



Hotel Focus – Primarily hotel and supporting service uses, such as restaurants. The hotel component would likely be 85% to 90% of total development.

Civic/Facility – Identified to show the potential location of necessary public service uses, such as a library, school, community center, government office, etc.



Parks/Open Space – Passive and active park land, including land that cannot be built on because it is in a floodplain or wetland. This land may be private or publicly owned. Regardless of ownership, it can be accessed by all residents and employees of Tysons.



B. Parks and Open Spaces Menu

The parks and open space plan proposed for Tysons has four key elements:

Large Civic Gathering Plaza – A 3.5 acre park, located one block from the Tysons Central 7 station, is the signature park for Tysons. Large enough to support public, civic and cultural events, this park could support a weekend craft or farmers market, summer concerts or weekend festivals.

Enhancement of Existing Parks - The restoration and enhancement of Scotts Run and Old Courthouse Spring Branch stream valley parks will strengthen Tysons existing natural systems and topographical features.

Multiple Urban Parks - A diversity of public spaces (plazas, squares, parks, greens, courtyards, gardens, playgrounds and recreational facilities) ranging in size, function and character and providing both formal and informal gatherings enable access for all who live and work in Tysons. Locating parks adjacent to residential and mixed-use office buildings provide “eyes” on streets and parks for a sense of public safety and activity focused on the park. Examples of urban parks are:

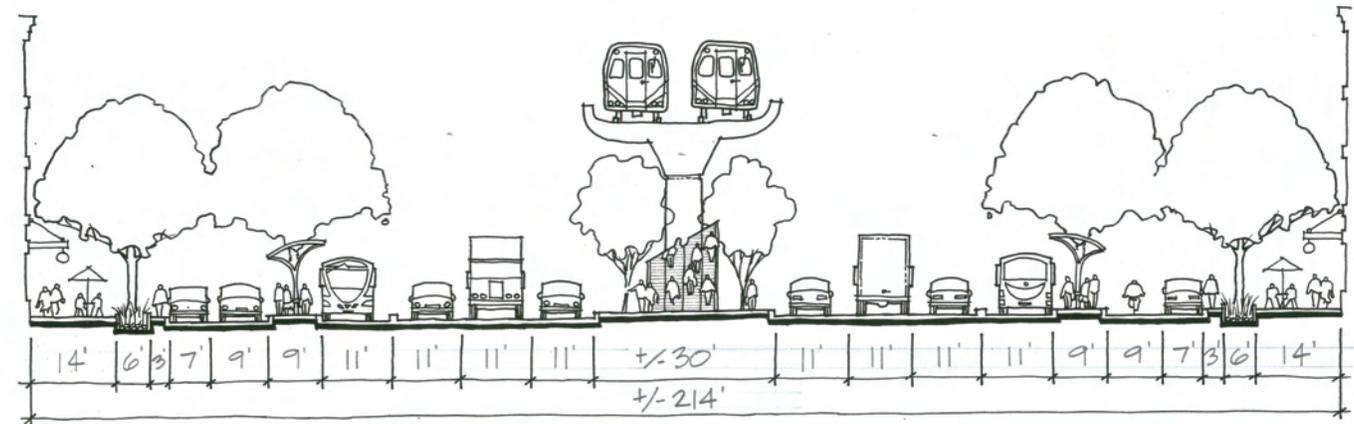
- **Neighborhood Park** - Serves as the recreational and social focus of the neighborhood, and offers a balance of active and passive recreation activities to neighborhood residents within walking distances of homes. Focus is on informal active (half-court basketball, playground) and passive recreation (lawn).
- **Park Plaza** - Public spaces set aside for civic purposes and commercial activities. Usually located at the intersection of important streets or other significant locations. The landscape is mostly hard-surface, and may have trees or other plantings, public art or water features.
- **Mini-Park** - Incorporated into developments and designed for the use of the people working and living there. Designed to provide a limited or isolated recreational need. Privately owned yet contribute to the overall public park and recreation system.
- **Rooftop Park** - Rooftops of buildings that incorporate active or passive recreation space. Designed for the use of the people working and living there. Designed to provide a limited or isolated recreational need. Privately owned yet contribute to the overall public park and recreation system.

Green Street Network – A series of park-like boulevards will connect all of Tysons. This green network can offer non-motorized travel (trails, bikeways, walking and jogging trails) to connect, link, feature and bring nature and green systems into Tysons.

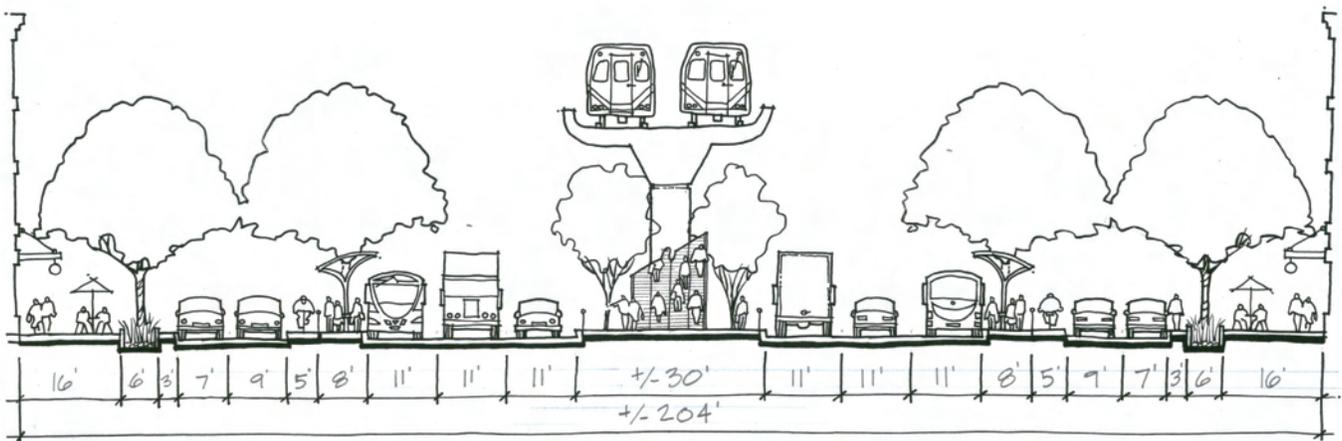


C. Complete Street Sections Menu

Major Arterial: Option 1

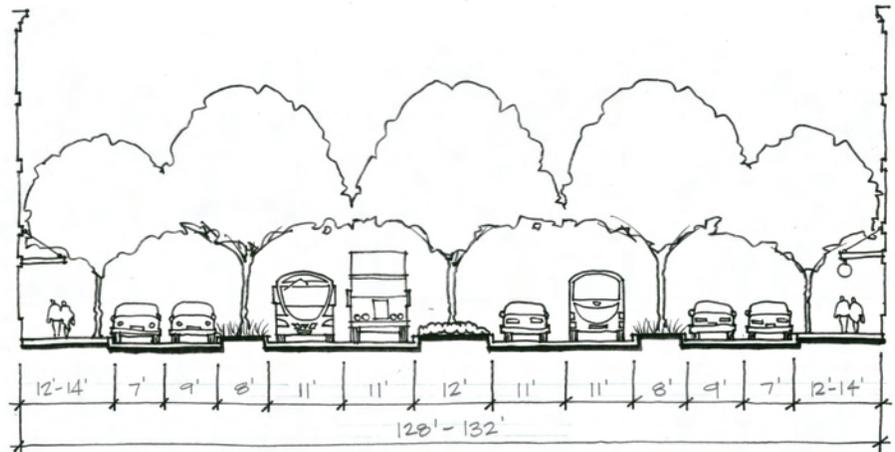


Major Arterial: Option 2

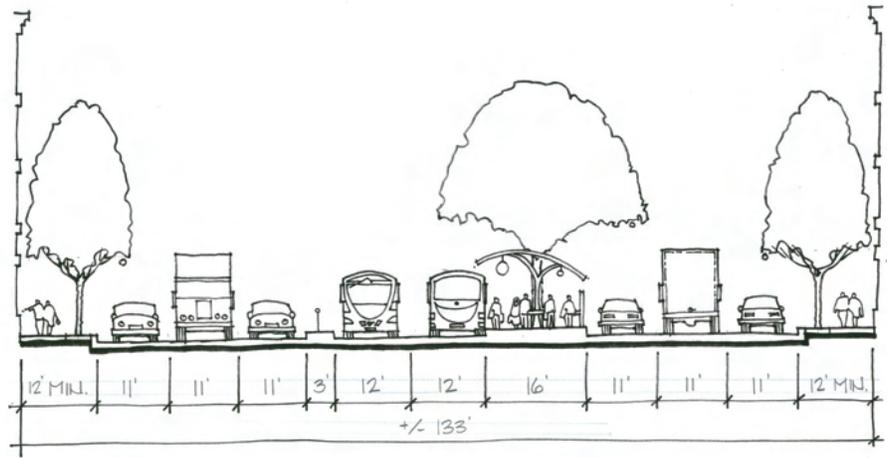


	Major Arterial (Option 1)	Major Arterial (Option 2)
ROW (approximate)	220' - 260'	220' - 260'
Number of Lanes	8	8
Circulator	Yes	Yes
Description	Dedicated Transit Lanes	No Dedicated Transit Lanes
Example	Rt. 7, Rt. 123	Rt. 7, Rt. 123

Median Arterial: Option 1

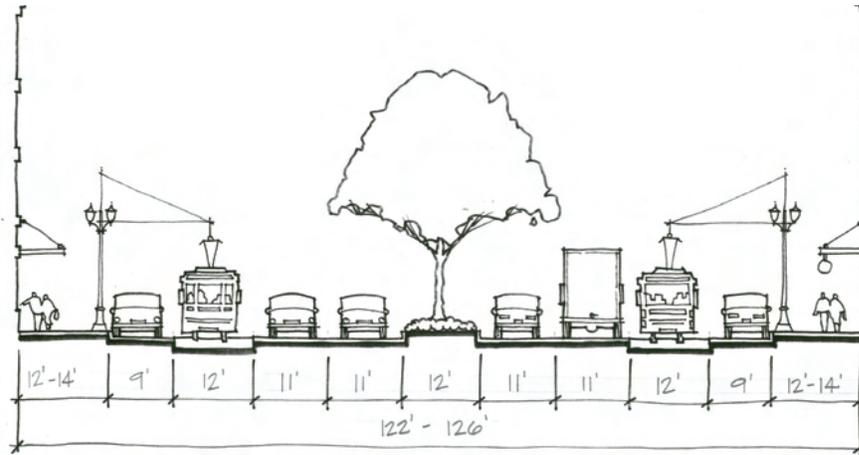


Medium Arterial: Option 2

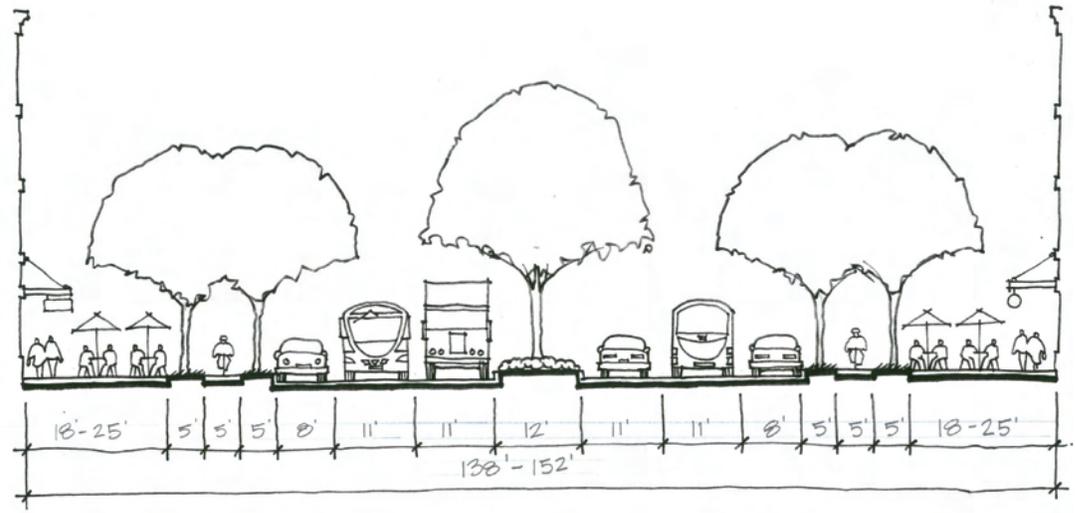


	Medium Arterial (Option 1)	Medium Arterial (Option 2)
ROW (approximate)	128' - 152'	128' - 152'
Number of Lanes	6	6
Circulator	Yes	Yes
Description	4 travel lanes, 2 dedicated transit lanes with center median, double medians on the side	4 travel lanes, 2 dedicated transit lanes / HOV, single median
Example	Boone Blvd Extension, International	Boone Blvd Extension, International

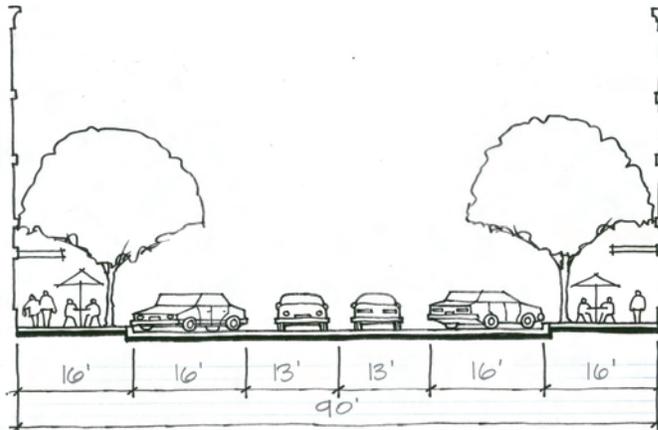
Streetcar Boulevard



Minor Arterial

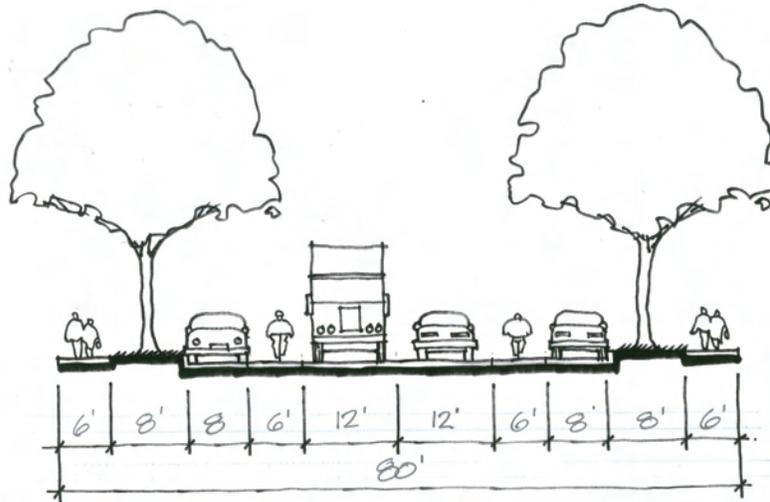


Main Street

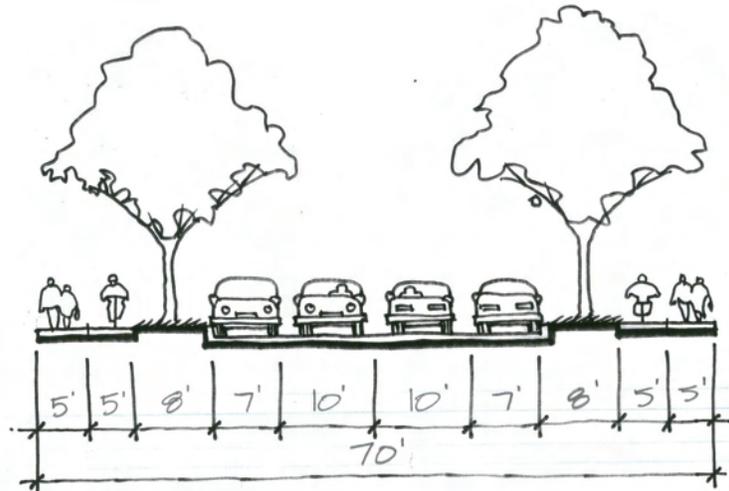


	Streetcar Boulevard	Minor Arterial	Main Street
ROW (approximate)	122' - 126'	112' - 122'	90'
Number of Lanes	4	4	2
Circulator	Yes	Yes	
Description	Median, two travel lanes, one dedicated streetcar lane, on-street parking	Median, two travel lanes, two transit / HOV lanes	
Example		West Park Drive, Old Meadow Drive	

Collector



Local (Option 1)



	Collector	Local (Option 1)	Local (Option 2)
ROW (approximate)	70' - 80'	70'	60'
Number of Lanes	2	2	2
Circulator	No	No	No
Description	Similar to local, with wider lanes	Multi-family and commercial with parking	Residential street with parking

D. Prototype and Base Case Numbers

Existing Built						
District	Acres	Total Floor Area (sq ft)	Total Employment GFA (sq ft)	Office Floor Area (sq ft)	Retail Floor Area (sq ft)	Hotel Floor Area (sq ft)
Eastside	232	4,974,500	1,447,000	1,114,500	81,500	251,500
North Central	289	7,945,500	5,373,500	5,076,500	0	296,500
Northwest	109	1,240,500	2,000	0	2,000	0
Old Courthouse	181	5,216,000	4,929,500	4,392,500	473,500	64,000
Tysons Central 123	243	7,906,000	7,619,000	3,217,500	3,807,000	594,000
Tysons Central 7	178	7,552,500	7,262,000	5,773,000	1,007,500	482,000
Tysons East	165	4,175,500	3,533,000	3,533,000	0	0
Tysons West	255	5,398,500	5,398,500	3,723,000	916,000	760,000
TOTAL	1652	44,409,500	35,564,500	26,830,000	6,287,000	2,447,500

Existing Built - continued									Land Use Mix	
District	Residential Floor Area (sq ft)	Dwelling Units	Residential Pop.	Employee Pop.	Office Employ	Retail Employ	Hotel Employ	Jobs per HH	Employ	Res
Eastside	3,527,500	3,000	6,000	4,000	4,000	200	200	1.3	29%	71%
North Central	2,572,500	3,000	6,000	17,000	17,000	0	200	6.1	68%	32%
Northwest	1,238,500	1,000	2,000	0	0	0	0	0.0	0%	100%
Old Courthouse	286,500	200	400	15,500	14,500	1,000	50	77.6	95%	5%
Tysons Central 123	287,234	300	600	19,500	10,500	8,500	500	68.7	96%	4%
Tysons Central 7	290,000	200	400	22,000	19,000	2,000	400		96%	4%
Tysons East	642,500	600	1,000	12,000	12,000	0	0	18.9	85%	15%
Tysons West	0	0	0	15,000	12,500	1,000	600	--	100%	0%
TOTAL	8,845,000	8,000	16,000	105,500	89,500	14,000	2,000	13.1	80%	20%

*Numbers greater than 1,000 are rounded to nearest increment of 500; numbers less than 1,000 are rounded to the nearest increment of 100

Base Case (Current Comprehensive Plan)						
District	Acres	Total Floor Area (sq ft)	Total Employment GFA (sq ft)	Office Floor Area (sq ft)	Retail Floor Area (sq ft)	Hotel Floor Area (sq ft)
Eastside	232	5,898,00	1,544,000	1,142,000	150,500	251,500
North Central	289	11,295,000	6,279,000	5,850,500	130,500	298,000
Northwest	109	1,240,500	2,000	0	2,178	0
Old Courthouse	181	6,987,5000	6,297,500	5,745,000	381,000	171,500
Tysons Central 123	243	17,248,000	14,371,500	9,238,000	3,876,000	1,258,000
Tysons Central 7	178	12,344,000	10,110,500	8,993,500	633,500	483,500
Tysons East	165	7,617,500	6,299,000	5,884,500	190,000	224,500
Tysons West	255	11,697,000	8,093,500	6,935,500	485,000	673,000
TOTAL	1652	74,328,000	52,998,000	43,789,000	5,849,000	3,360,000

Base Case (Current Comprehensive Plan) - continued									Land Use Mix	
District	Residential Floor Area (sq ft)	Dwelling Units	Residential Pop.	Employee Pop.	Office Employ	Retail Employ	Hotel Employ	Jobs per HH	Employ	Res
Eastside	4,354,000	3,500	7,500	4,500	4,000	300	200	1.2	26%	74%
North Central	5,016,000	4,000	8,500	20,000	19,500	300	200	4.8	56%	44%
Northwest	1,238,500	900	1,500	0	0	0	0	0.0	0%	100%
Old Courthouse	689,500	600	1,000	20,000	19,000	800	100	35.0	90%	10%
Tysons Central 123	2,876,000	2,500	5,000	40,500	31,000	8,500	1,000	16.9	83%	17%
Tysons Central 7	2,233,500	2,000	3,500	32,000	30,000	1,500	400	17.1	82%	18%
Tysons East	1,319,000	1,000	2,000	20,000	19,500	400	200	18.4	83%	17%
Tysons West	3,603,000	3,000	6,000	24,500	23,000	1,000	500	8.2	69%	31%
TOTAL	21,330,000	17,500	35,500	161,500	146,000	13,000	2,500	9.2	71%	29%

Prototype A						
District	Acres	Total Floor Area (sq ft)	Total Employment GFA (sq ft)	Office Floor Area (sq ft)	Retail Floor Area (sq ft)	Hotel Floor Area (sq ft)
Eastside	232	6,864,500	1,305,000	810,000	171,500	323,000
North Central	289	11,353,000	6,337,000	5,962,000	80,500	294,500
Northwest	109	1,240,500	2,000	0	2,000	0
Old Courthouse	181	6,843,500	5,740,000	5,111,500	369,500	259,000
Tysons Central 123	243	19,100,500	13,795,500	8,389,500	3,838,500	1,567,000
Tysons Central 7	178	18,414,500	8,768,000	7,794,500	456,500	517,000
Tysons East	165	14,252,500	7,418,000	7,006,000	258,500	153,500
Tysons West	255	18,208,500	9,394,500	7,833,000	584,500	977,500
TOTAL	1652	96,277,500	52,760,000	42,906,500	5,762,000	4,091,500

Prototype A - continued									Land Use Mix	
District	Residential Floor Area (sq ft)	Dwelling Units	Residential Pop.	Employee Pop.	Office Employ	Retail Employ	Hotel Employ	Jobs per HH	Employ	Res
Eastside	5,559,500	4,500	9,000	3,500	2,500	400	200	0.7	19%	81%
North Central	5,016,000	4,000	8,500	20,500	20,000	200	200	4.9	56%	44%
Northwest	1,238,500	900	1,500	0	0	0	0	0.0	0%	100%
Old Courthouse	1,103,000	900	2,000	18,000	17,000	800	200	19.6	84%	16%
Tysons Central 123	5,305,000	4,500	9,000	37,500	28,000	8,500	1,000	8.5	72%	28%
Tysons Central 7	9,646,500	8,000	16,000	27,500	26,000	1,000	400	3.4	48%	52%
Tysons East	6,834,500	5,500	11,000	24,000	23,500	600	100	4.2	52%	48%
Tysons West	8,814,000	7,500	14,500	28,000	26,000	1,500	800	3.8	52%	48%
TOTAL	43,517,500	36,000	72,000	159,000	143,000	13,000	3,000	4.4	55%	45%

Prototype B						
District	Acres	Total Floor Area (sq ft)	Total Employment GFA (sq ft)	Office Floor Area (sq ft)	Retail Floor Area (sq ft)	Hotel Floor Area (sq ft)
Eastside	232	10,311,500	1,647,000	1,074,500	235,500	337,000
North Central	289	17,280,500	5,732,500	4,813,500	432,500	486,000
Northwest	109	1,240,500	2,000	0	2,000	0
Old Courthouse	181	9,354,500	4,778,000	3,867,500	440,500	470,000
Tysons Central 123	243	25,496,000	17,705,500	12,191,500	3,469,000	2,045,500
Tysons Central 7	178	21,104,500	11,821,500	10,489,500	586,000	746,000
Tysons East	165	18,559,500	12,173,500	11,345,000	395,000	433,500
Tysons West	255	24,151,000	13,673,500	11,445,500	811,000	1,416,500
TOTAL	1652	127,498,500	67,534,000	55,227,000	6,372,000	5,935,500

Prototype B - continued									Land Use Mix	
District	Residential Floor Area (sq ft)	Dwelling Units	Residential Pop.	Employee Pop.	Office Employ	Retail Employ	Hotel Employ	Jobs per HH	Employ	Res
Eastside	8,664,500	7,000	14,500	4,500	3,500	500	300	0.6	16%	84%
North Central	11,548,000	9,500	19,000	17,500	16,000	1,000	400	1.8	33%	67%
Northwest	1,238,500	900	1,500	0	0	0	0	0.0	0%	100%
Old Courthouse	4,576,500	4,000	7,500	14,000	13,000	1,000	400	3.7	51%	49%
Tysons Central 123	7,790,500	6,500	13,000	50,000	40,500	7,500	1,500	7.7	69%	31%
Tysons Central 7	9,283,000	7,500	15,500	37,000	15,000	1,500	600	4.8	56%	44%
Tysons East	6,386,000	5,500	10,500	39,000	38,000	900	300	7.3	66%	34%
Tysons West	10,477,500	8,500	17,500	41,000	38,000	2,000	1,000	4.7	57%	43%
TOTAL	59,964,0	50,000	100,000	203,000	184,000	14,000	4,500	4.1	53%	47%

Transportation Analysis

- Methods
- Networks
- Findings and Conclusions



Fairfax County, Virginia

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PLANNING

1

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Methods

- MWCOG / CS Fairfax Post-Processor Model
- FHWA TDM Analysis Tool
- EPA Smart Growth 4D Tool
- CS Circulator Pivot-Point Model



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PLANNING

2

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Two Networks

Two networks tested with each Prototype

Element	Network 1	Network 2
Metrorail extension through Tysons Corner	✓	✓
Beltway HOT Lane improvements	✓	✓
Enhanced connectivity; grid of streets	✓	✓
Enhanced TDM and parking management	✓	✓
Grade separations at key intersections and access management on Route 7 and 123	✓	
Additional ramps to Beltway and Toll Road	✓	
Transit Circulators (in mixed traffic)	✓	
Transit Circulators (dedicated right-of-way)		✓



Fairfax County, Virginia

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PLANNING

3

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Networks 1 and 2

Metrorail Extension through Tysons



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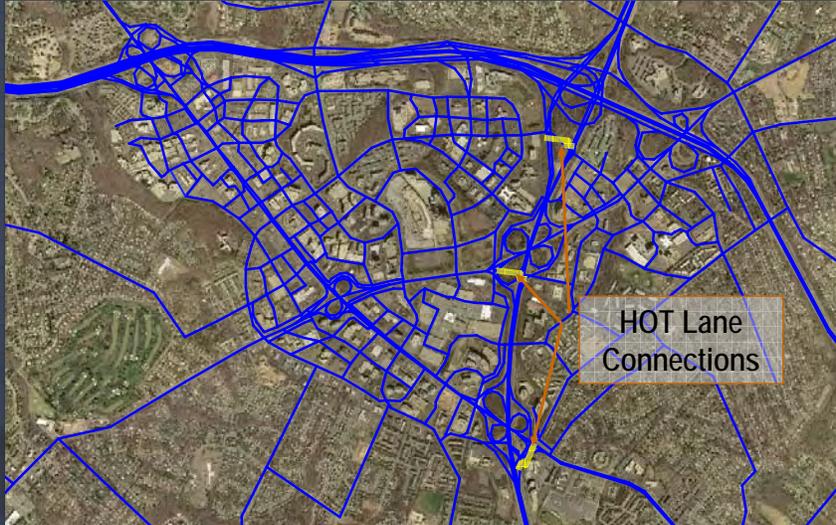
PLANNING

4

Michael Hovatt, Esq. & Partners, Inc.

Networks 1 and 2

HOT Lane Connections



Fairfax County, Virginia

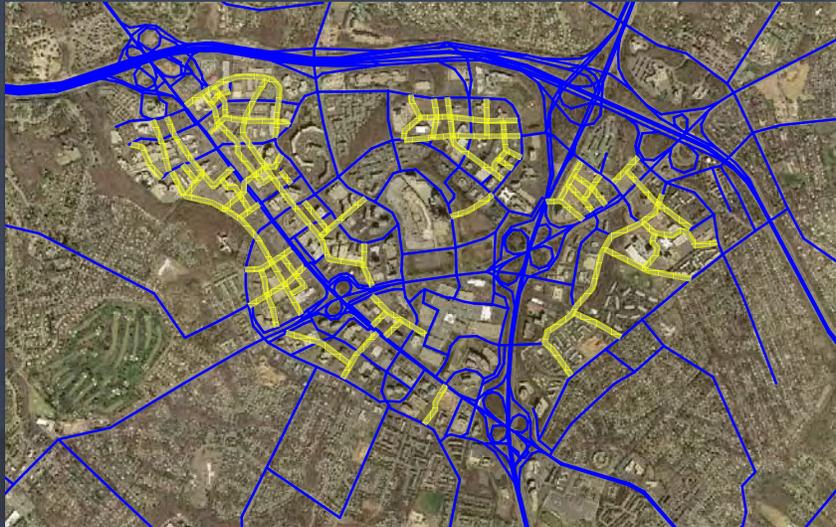


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Michael Housh, Esq. & Partners, Inc.

Networks 1 and 2

Grid of Streets



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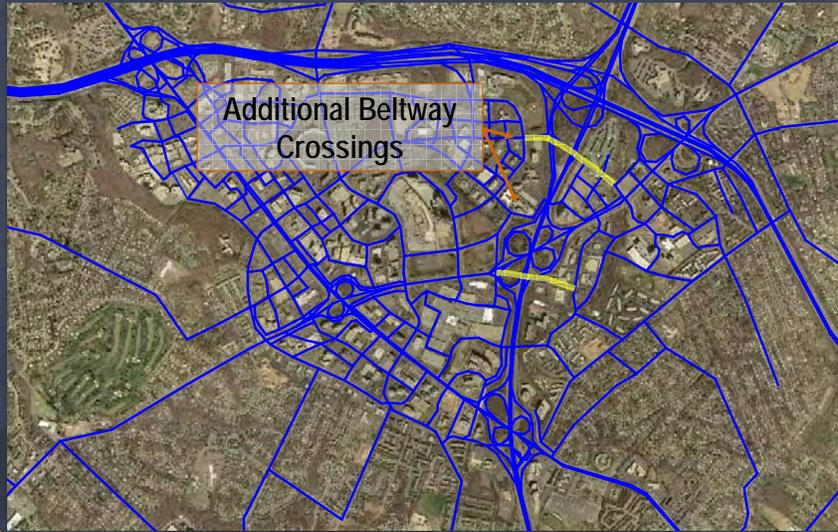


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Michael Housh, Esq. & Partners, Inc.

Networks 1 and 2

Beltway Crossings (more connectivity)



Fairfax County, Virginia

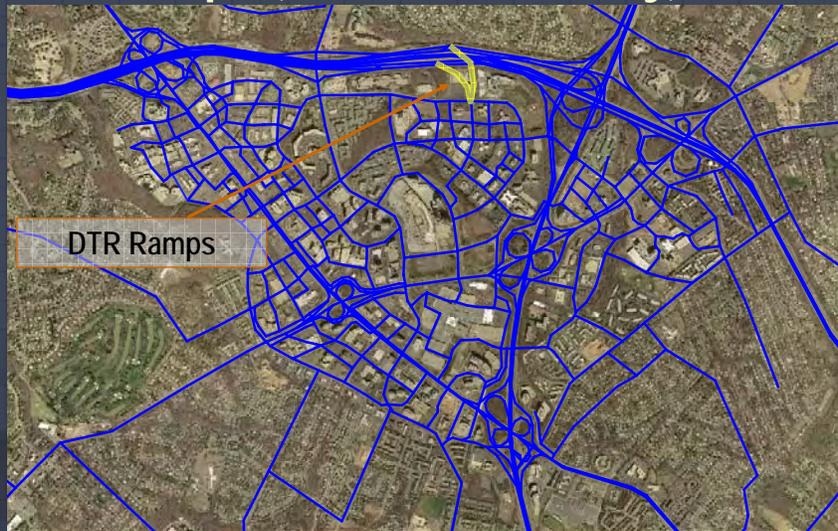
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Michael Housh, Esq. & Partners, Inc.

Network 1 and 2

DTR Ramps (more connectivity)



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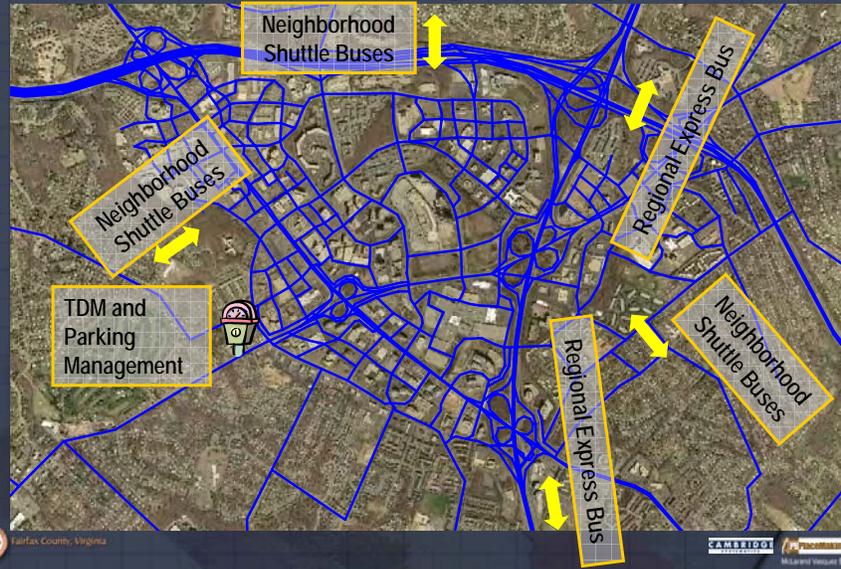
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Michael Housh, Esq. & Partners, Inc.

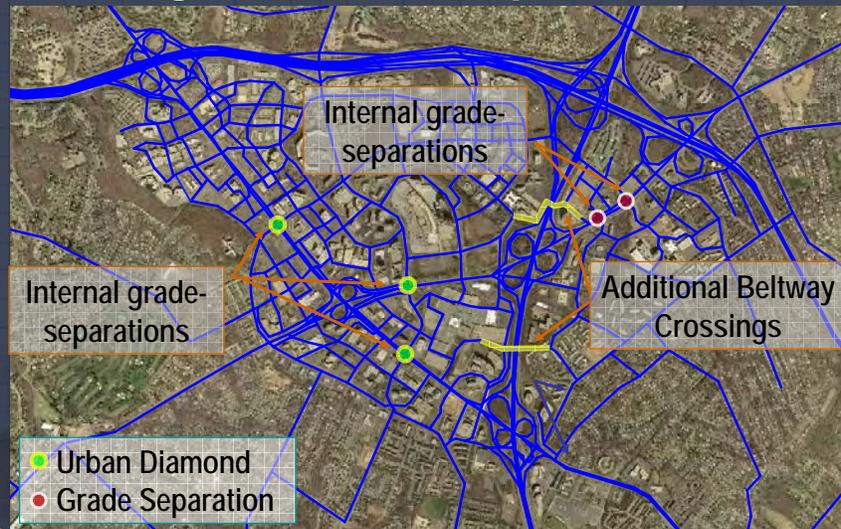
Networks 1 and 2

Transit/TDM/Parking Management



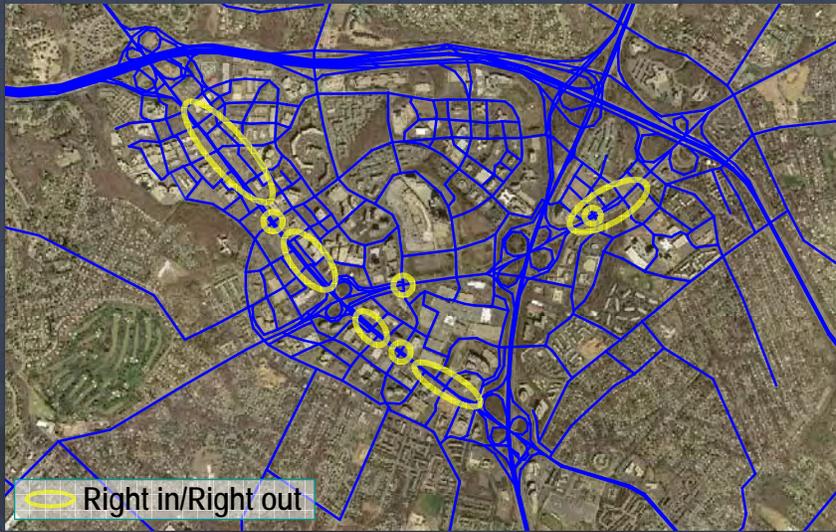
Network 1

Crossings and Grade Separations



Network 1

Access Management



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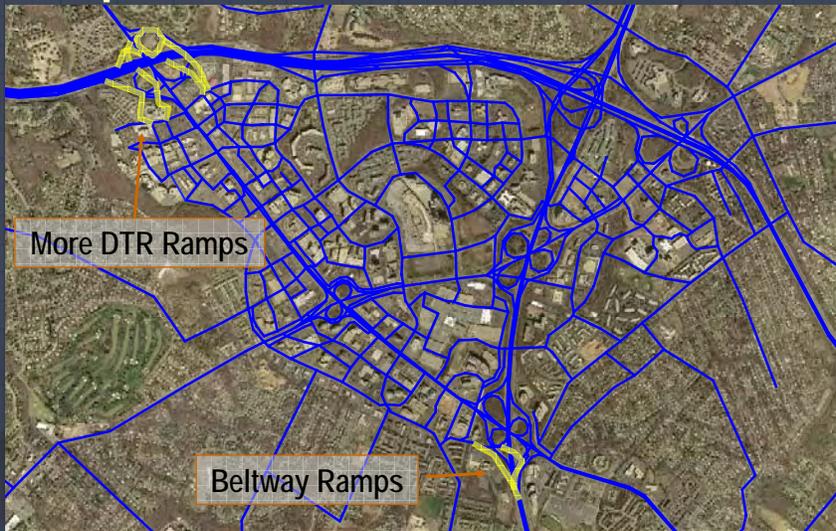
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Network 1

Ramps



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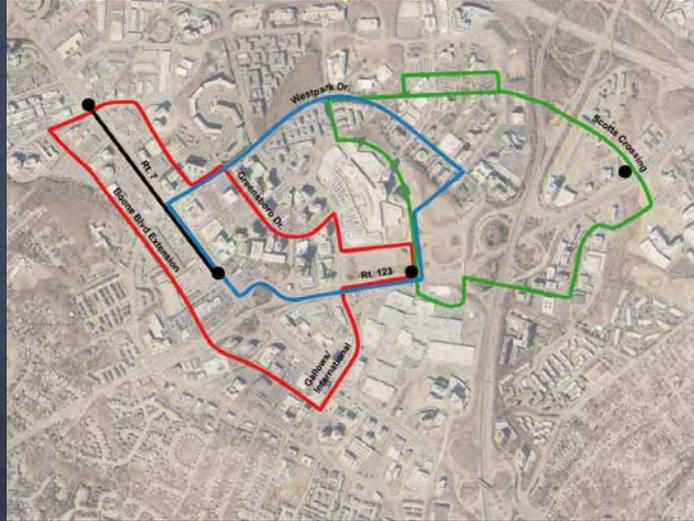
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Network 1

Transit Circulators (in Mixed Traffic)



Fairfax County, Virginia

(CONCEPT FOR TESTING PURPOSES)

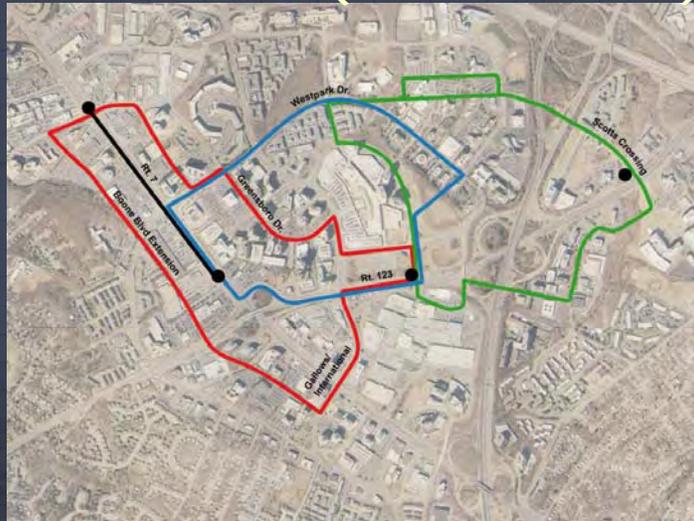


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Michael Weiser, Esq. & Partners, Inc.

Network 2

Transit Circulators (Dedicated ROW)



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(CONCEPT FOR TESTING PURPOSES)



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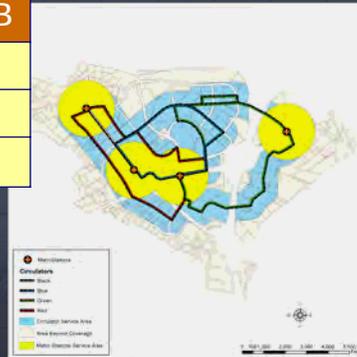
Michael Weiser, Esq. & Partners, Inc.

TDM Trip Reductions

- Enhanced TDM programs provide important daily vehicle trip reductions

Daily Trip Reduction Outputs

Area	Prototype A	Prototype B
Station Areas	11.4%	10.4%
Circulator Areas	4.4%	4.5%
Other Tysons	1.2%	1.3%



Fairfax County, Virginia

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Milward Weissman Erskin & Partners, Inc.

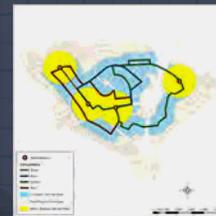
Urban Form Trip Reductions

- Density
- Diversity
- Destinations
- Design



Daily Trip Reduction Outputs

Area	Prototype A	Prototype B
Station Areas	7%	8%
Circulator Areas	6%	10%
Other Tysons	2%	5%



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Transit Circulator Reductions

- Transit Circulator has potential to in-effect extend comfortable walking distances from Metrorail stations

Daily Trip Reduction Outputs

	Additional Transit Capture
Prototype A	6%
Prototype B	14%



Fairfax County, Virginia

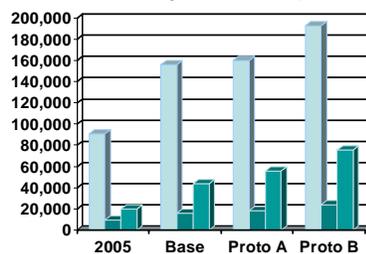


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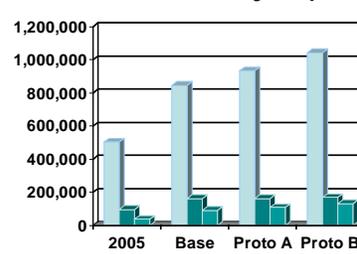
McLendon Housley Erskine & Partners, Inc.

Resulting Trip Forecasts

Daily Work Trips



Total Daily Trips



Auto Driver Passenger Transit

Auto Driver Passenger Transit

Resulting mode shares are similar in Prototype A and B:

- Auto driver 78% share of total trips
- Passenger 13% share of total trips
- Transit 9%-10% share of total trips
- Transit 24%-26% share of work trips



Fairfax County, Virginia

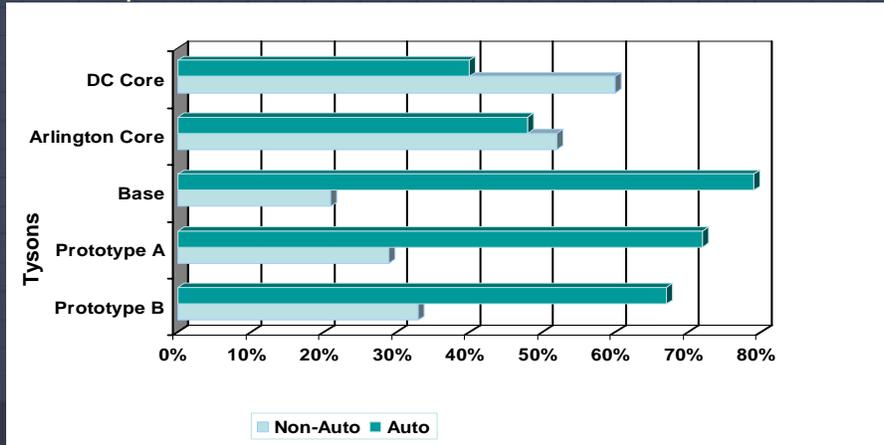


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McLendon Housley Erskine & Partners, Inc.

More Transit Usage

Daily Work Trip Mode Share Comparison of Indicated Areas



Fairfax County, Virginia

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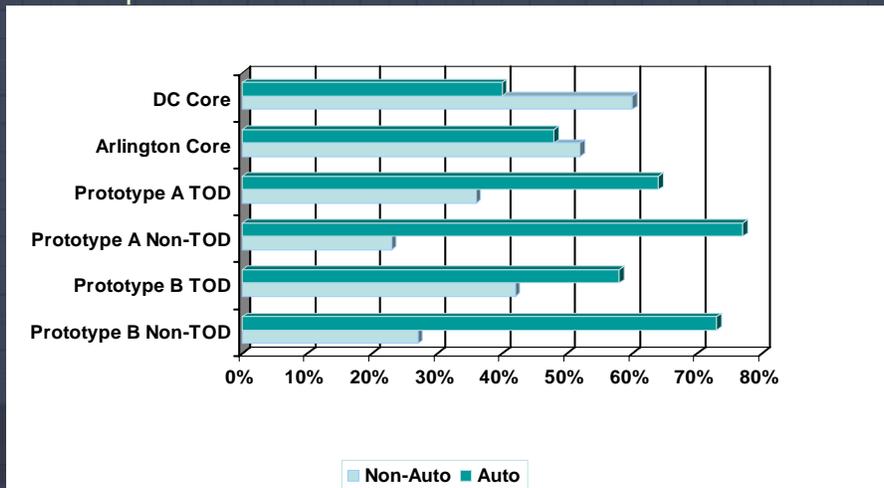


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More Transit Usage

Daily Work Trip Mode Share Comparison of Indicated Areas



Fairfax County, Virginia

TOD = Area within 1/4 Mile of Stations

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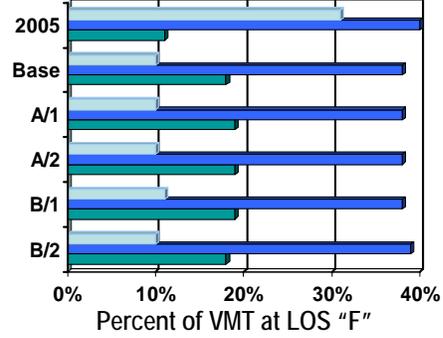
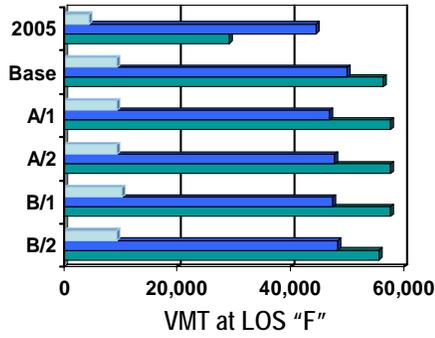


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Congested VMT

Tysons Corner Area Roadways (including I-495 and Dulles Toll Road)



- Congestion level is similar in Base and Prototypes
- Greater street connectivity and improved jobs/housing balance are mitigating factors

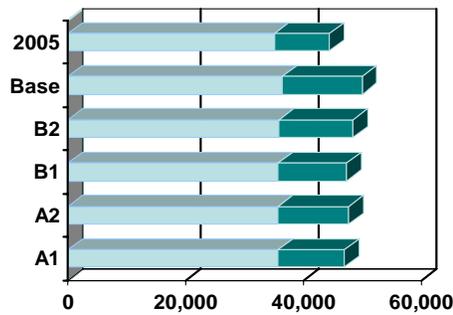


VMT = Vehicle Miles Travel



Congested VMT in PM

PM Peak Period VMT at LOS "F"



- Most of the congested conditions are in the PM peak
- Most of the congested VMT is on I-495/DTR links



VMT = Vehicle Miles Travel



Travel Times within Tysons

Increase in Evening Travel Times over 2005 Model Results

Location	Base	A/1	A/2	B/1	B/2
VA 7 & VA 123 to Dulles Toll Road & VA 7	+3.7 min (69%)	+1.9 min (36%)	+2.4 min (45%)	+1.5 min (28%)	+1.9 min (33%)
International Drive & VA 123 to Dulles Toll Road	+5.3 min (53%)	+4.2 min (42%)	+4.7 min (47%)	+4.8 min (48%)	+4.7 min (47%)
VA 7 & VA 123 to I-495	+0.8 min (15%)	+0.3 min (5%)	+0.9 min (3%)	+0.3 min (5%)	+0.3 min (5%)

- Travel times increase less under the Prototypes than under the Base
- The model does not respond dramatically to the grade separations



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Travel Times to Tysons

Increase in Evening Travel Times over 2005 Model Results

Location	Base	A/1	A/2	B/1	B/2
Lawyers Rd & Hunter Mill Rd to VA 7 & VA 123	+2.9 min (10%)	+1.6 min (5%)	+1.3 min (4%)	+1.4 min (5%)	+1.3 min (4%)
Bailey's Crossroads to VA 7 & VA 123	+3.7 min (14%)	+2.0 min (7%)	+3.8 min (14%)	+4.3 min (16%)	+3.7 min (14%)
McLean (VA 123 & Old Dominion Dr) to International Drive & VA 123	+1.3 min (14%)	+1.6 min (18%)	+1.4 min (16%)	+1.3 min (15%)	+1.4 min (16%)

- Modest differences from the Base under the Prototype development levels
- Difference between Prototype A and B is relatively small



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Surrounding Road Impacts



- Impacts being reviewed at selected surrounding road locations
- Six gateway locations show congested conditions under Base and Prototype A & B



Fairfax County, Virginia



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Surrounding Road Impacts

Route	Location	2005	Base	A/1	A/2	B/1	B/2
Dolley Madison Blvd	Mayflower Dr to Old Dominion Dr	1.75	2.04	1.83	1.79	1.78	1.78
Chain Bridge Rd	Anderson Rd to VA 694/Great Falls St	0.55	0.71	0.86	0.96	1.04	1.03
VA 7	Haycock Rd/Shreve Rd to West St	1.47	1.84	1.76	1.75	1.76	1.76
VA 123	Gosnell Rd/Gallows Rd to Westbriar Dr NE	1.16	1.33	1.25	1.23	1.24	1.25
VA 7	VA 267 to Lewinsville Rd	1.29	1.78	1.56	1.60	1.60	1.60
Lewinsville Rd	VA 7 to Lancia Dr	0.82	0.91	1.05	1.06	1.10	1.10
Lewinsville Rd	Winter Hunt Rd and Meadow Green Ln	1.17	1.26	1.32	1.37	1.40	1.40
Lewinsville Rd	Scotts Run Rd to Windy Hill Rd	0.88	0.89	0.95	1.02	1.04	1.03
Anderson Rd	Magarity Rd/VA 650 to Dartford Dr	0.60	0.39	0.60	0.59	0.81	0.82
Gallows Rd	Oak St to Idylwood Rd	0.81	1.09	0.97	0.95	0.93	0.93
Old Courthouse Rd	Westbriar Dr NE to Westwood Dr NE	1.00	1.17	1.02	1.06	0.96	0.96

Daily volume to capacity ratios

Blue indicates facilities with better performance under the Prototypes



Fairfax County, Virginia



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Findings and Conclusions

- Added development generates additional trips, but transit ridership is significant
- Forecast congestion levels are similar in Base and Prototypes A and B
- Prototype B has highest non-automobile mode share
- Grade separations do not result in marked improvements in network performance

**Summary of Public Facilities Analyses
 For Base Case and Prototypes A and B**

Fairfax County staff briefed representatives of County agencies and private utilities on the two prototypes in December, 2007. Each agency was provided with relevant maps and data and was asked to perform a general analysis of the two prototypes as well as the Base Case.

Summary of Land Use Prototypes

Prototype	Residents	Dwelling Units	Employees	Total Square Feet of Development (% Residential)
Existing (2005)	16,112	8,056	106,871	44.4 million sq. ft. (20 % residential)
Base Case	32,517	16,259	161,545	72.5 million sq. ft. (27 % residential)
Prototype A	72,500	36,250	158,973	96.3 million sq. ft. (45 % residential)
Prototype B	99,912	49,956	202,816	127.5 million sq. ft. (47 % residential)

For this round of analysis, facility providers were asked to address urban rather than suburban standards; conservation measures; and the impact of new technologies on their services. They were also asked to provide estimated costs for capital facilities. Copies of the facility providers' formal written responses will be available on the Tysons website, www.fairfaxcounty.gov/tysons. Section headings that are underlined and shown in blue below contain clickable links to these documents, for those desiring additional information.

This summary focuses on the number of capital facilities needed to serve new development at Tysons. In cases where the same number of facilities are needed to serve both Prototypes A and B, the staging of facility construction would vary over time. That is, the third fire station might be needed sooner under Prototype B than Prototype A.

[Dominion Virginia Power](#)

Dominion currently operates a substation on Tyco Road, which served a peak load of 216 MVA (megavolt-amperes) during summer 2005. This substation could be expanded to serve 400 MVA under normal conditions. The following table shows the projected load for each of the scenarios, including electricity for Metrorail operations.

Projected Electricity Loads

Scenario	Projected Load	% Increase from 2005
Base Case	480 MVA	122 %
Prototype A	562 MVA	160%
Prototype B	741 MVA	243%

Because each of the scenarios is above the potential capacity of the existing substation, a new substation would need to be built. The ideal location for such a facility is south of the intersection of Route 7 and Spring Hill Road, adjacent to the existing transmission line. This would be a conventional walled substation and would require up to 2.5 acres of land.

Fairfax County Fire & Rescue Department

To accommodate growth at the level of the Base Case, the Fire & Rescue Department (FRD) recommends relocation and expansion of the existing facility at Tysons, Station 29, from Spring Hill Road to county-owned land on Jones Branch Drive. FRD also plans for a new station in the vicinity of Old Meadow and Chain Bridge Roads. This station is needed because the closest station to the east, McLean (Station 1), and the closest station to the west, Station 29, do not provide adequate response time to serve development on the east side of Tysons.

To accommodate growth in Prototypes A and B, FRD would require a second new station in the vicinity of International Drive and Chain Bridge Road. The new fire stations at Tysons are planned to contain 24,000 square feet with 5 to 6 bays and the following apparatus: two engines, two medics, one specialty unit (truck or rescue), and one support unit. In addition, one of the stations at Tysons will need to include a battalion management team which includes a battalion chief and an EMS supervisor to oversee all emergency service delivery throughout Tysons.

The new stations are anticipated to be located at the base of a commercial or residential building, with the ground level containing the apparatus bays. The second and third levels would include classroom training facilities, battalion management offices, and offices for fire prevention and support personnel. In addition to the urban form of the proposed new fire stations, their staffing and apparatus are also provided to urban levels. This will enable FRD to serve Tysons from stations within Tysons, rather than the suburban model of calling on stations from throughout the county. This is necessary to provide adequate response time to high rise buildings and high density development.

Fairfax County Park Authority

The Park Authority currently provides about 85 acres of parkland at the lower-density edges of Tysons. To serve new development at Tysons, the Park Authority recommends 1.5 acres of parkland per 1,000 residents. In addition, they recommend the provision of 1 acre per 10,000 employees. These service level standards are based on a review of multiple urban locations and take into consideration the use of outdoor places before, during and after the work day by residents and workers alike. Based on these standards, the Base Case and the two Prototypes would require the following additional park acreage:

Scenario	Local Parkland Needed Under New Standards
Base Case	41 acres
Prototype A	97 acres
Prototype B	132 acres

The Park Authority further recommends the creation of a three-tiered urban park system that adds and connects public and private open space, trails, leisure and recreational spaces. The first tier is urban pocket parks ranging from one-quarter acre to one acre in size. These are designed to attract visitors for casual, social outdoor activities such as outdoor cafes, fountains, and performance spaces. Urban pocket parks are often integrated into substantial developments with private ownership and maintenance.

The second tier is urban park nodes of from one to five acres; they may be owned, managed and/or maintained through public or private entities, or public-private partnerships. These parks should provide facilities such as gardens, water features, tot lots and playgrounds, fitness courses and trails, multi-use courts, and plazas.

The third tier is a large, centrally accessible public park located in the urban core of Tysons near a planned Metro station entrance. The Park Authority recommends that this park be located in the Tysons 7 District, and that it be publicly owned and maintained, possibly with assistance from partnership groups. It should include a range of athletic and recreational facilities, as well as a gathering space for performances, restrooms, water features and display gardens. Ideally, this park should be at least 10 acres.

Fairfax County Police Department

The Police Department believes that the current McLean District station is ideally located to continue to provide service to both Tysons Corner and the communities around McLean. However, the McLean District could not absorb all of the increased workload associated with growth at Tysons under any of the three scenarios, while maintaining its current service area. Therefore, FCPD recommends that the County expedite construction of a new station in the Merrifield/Dunn Loring area. This station is currently in the Capital Improvement Program but not yet assigned to a year. Once a Merrifield/Dunn Loring station is underway, FCPD would reallocate workload among its existing districts, to reduce the size of the McLean District's service area.

For Prototypes A and B, FCPD also recommends the establishment of a small satellite office in the urban core of Tysons. This would support the foot patrols and bike patrols anticipated to serve the Tysons Central 7 and Tysons Central 123 Metro station areas. The satellite office could be co-located with a future Fire & Rescue station, such as the one proposed for the International Drive and Chain Bridge Road area; it could be co-located with a Metro Transit Police station; or it could be a storefront within a larger commercial property.

Finally, both the Police and Fire Departments recommend that developers of high-rise commercial building in Tysons be encouraged to add helicopter landing facilities to their roof structures where feasible, and to make them available for public use during emergencies. The presence of such helipads would provide quick helicopter access to the urban core of Tysons, and would be very desirable in emergency operations.

Fairfax County Public Schools

The following table outlines the projected student yields for each scenario. These projections are derived from the current countywide ratios for mid/high-rise dwelling units.

School Level	Base Case	Prototype A	Prototype B
Elementary	696	1,559	2,148
Middle	178	399	550
High	390	870	1,199
TOTAL	1,264	2,828	3,897

The enrollment projections have been normalized to show the school equivalents for the student population in Tysons. These figures are based on the typical capacity for a new school in the County (900 students per elementary school, 1,000 per middle school, and 2,500 per high school). FCPS believes that it will be able to accommodate middle and high school students at Tysons through modifications to existing facilities. To meet the projected elementary school needs, the school system will need new facilities. These may include urban style and smaller sized schools, with the possibility of elementary classrooms being provided in commercial office space.

School Level	Base Case	Prototype A	Prototype B
Elementary	0.8	1.7	2.4
Middle	0.1	0.3	0.5
High	0.1	0.3	0.4

Fairfax County Public Library

To accommodate growth at the level of the Base Case, the Library recommends a specialized mini-library of 4,000 to 5,000 square feet, located in a retail area or within an office building. This facility would have minimal print collections and extensive online access to electronic databases, along with professional staff to assist with research.

To serve development under Prototypes A and B, the Library would require a full-service community library of 17,000 square feet, including a public meeting room. This facility could also be located in a retail area or in an office building. A location near either the proposed Tysons Central 123 or Tysons Central 7 stations would permit the facility to reach both residential and workday populations. Because the new facility at Tysons will be an urban library, parking requirements will be a challenge. The Library believes that the circulator system envisioned in Prototype B would facilitate access to the new community library at Tysons.

Fairfax County Stormwater Management (DPWES)

Staff in the Stormwater Planning Division of DPWES believe that development under the Base Case and the two Prototypes, as well as the existing conditions at Tysons, are similar in terms of impervious cover and stormwater management. However, they believe that redevelopment will provide the County with opportunities to address stormwater management deficiencies and improve on-site controls. This in turn will help with restoration efforts downstream of Tysons.

Specifically, DPWES recommends that applicants for rezoning be requested to remove 30% of phosphorus from existing conditions. They also recommend the adoption of strategies to reduce stormwater runoff volumes and peak flows, such as Low Impact Development. DPWES further recommends that quantity controls be implemented that return water into the ground, reuse it, or significantly delay its runoff into the stream system. Their goal is for the stormwater quantity and quality control rates of redeveloped parcels be returned to the predevelopment condition.

Finally, DPWES recommends that evaluation of adequate outfall extend beyond minimum requirements. Rather than ending within a drainage pipe, the outfall area should extend downstream to the receiving stream channel.

Fairfax County Wastewater Management (DPWES)

Wastewater from Tysons Corner is treated at the Blue Plains Treatment Plant, which is owned and operated by the DC Water and Sewer Authority. As indicated in the analysis this past summer, the wastewater volume of the Base Case (the current Plan) and the three test scenarios were all significantly above the County's allocated treatment capacity at the Blue Plains Plant. In response to the issue of treatment capacity, DPWES has commissioned a consulting study to evaluate alternative means of addressing wastewater treatment. The results of this study are not expected to be available until March. DPWES would like to provide the Task Force with a full presentation of the study findings at that time.

Fairfax County Water Authority

Fairfax Water currently serves about 44% of the land area in Tysons Corner, roughly north of Route 123 and west of the Beltway. It calculated water demand in millions of gallons per day (MGD) for the entire study area, as shown in the table below.

Water Demand Projections

Scenario	Average Day Demand	Maximum Day Demand	Peak Hour Demand
Base Case	11.3 MGD	18.1 MGD	29.0 MGD
Prototype A	15.2 MGD	24.3 MGD	38.9 MGD
Prototype B	20.1 MGD	32.2 MGD	51.5 MGD

The Base Case would have no impact on supply and treatment facilities; the two prototypes could accelerate the need for additional capacity. All of the alternatives would require additional transmission facilities (pipelines, storage, and pumps) and distribution facilities (water mains). Fairfax Water does not consider these improvements to be impediments to higher densities in Tysons. A list of prospective water system projects capable of expanding service was provided by Fairfax Water and is included in their analysis posted at the Tysons website.

Regarding conservation measures, Fairfax Water notes that its rate structure allocates expenses for increasing system capacity to those consumers and developers requiring additional capacity. System growth is funded through the collection of peak use charges, paid by customers exhibiting a significant variation in seasonal water use, and system connection charges, paid primarily by land developers. More efficient water use, achieved through green building initiatives, benefits developers by limiting the system expansion component of utility capital investment funded by connection charges. Developers can leverage water conservation measures against building system design decisions to control project costs, and to delay or avoid costs for water system expansion.

Falls Church Water Services

The City of Falls Church currently provides water to about 56% of the land area in Tysons Corner, roughly south of Route 123 and east of the Beltway. The City recently completed a Water System Master Plan Supplement, updating their 2005 Master Plan to address growth at Tysons. The cost of the necessary infrastructure has been estimated and is being included in the City's capital improvement programming through the year 2020. The required improvements are the same for the Base Case and Prototypes A and B, although timing would vary depending on the alternative. Improvements to the water system are expected to be funded by availability fees paid by developers; Falls Church Water does not anticipate raising its commodity charge rate to pay for this infrastructure. Regarding conservation, the City has a peak use charge for excessive water use and has implemented plumbing code requirements for the use of low flow fixtures.

Washington Gas

Washington Gas serves Tysons Corner area through a gate station in the Dranesville area. This gate station is very centrally located in the region's system of gas pipelines, and is therefore considered to be in a "healthy" condition. Washington Gas estimates that Prototype A would increase output in this gate station by 25% above the Base Case, while Prototype B would increase output by 40% above the Base Case. These projections assume high-rise, multi-family housing units, which use about one-fourth as much gas as a typical single-family home.

Washington Gas is currently undertaking a comparison of future demand versus capacity for Fairfax County as a whole, and expects to have the results of its analysis this spring. This analysis would indicate if system improvements are necessary. However, any such improvements will be financed through the utility's rate system.

Telecommunication Providers

For this round of analysis, AT&T Wireless, Sprint Nextel and Verizon Wireless were asked to provide us with information on their capacity to serve growth at Tysons. To date no responses have been received from them.