




**Subdivision Staging Policy Worksession #1: Schools and Local Area Transportation Review**

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- Mary Dolan, Chief, Functional Planning & Policy, [mary.dolan@montgomeryplanning.org](mailto:mary.dolan@montgomeryplanning.org), 301-495-4552
-  Eric Graye, Supervisor, Functional Planning & Policy Division, [eric.graye@montgomeryplanning.org](mailto:eric.graye@montgomeryplanning.org), 301-495-4632
- Pamela Dunn, Planner/Coordinator, [pamela.dunn@montgomeryplanning.org](mailto:pamela.dunn@montgomeryplanning.org), 301-650-5649

**Completed: 07/06/12**

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**Description**

The Subdivision Staging Policy (formerly the Growth Policy) seeks to ensure timely delivery of public facilities (schools, transportation, water, sewer, and other infrastructure) to serve existing and future development. The Growth Policy Law (Article 3. Sec. 33A-15) requires that a Planning Board Draft be prepared and sent to the County Council by August 1, 2012.

The Subdivision Staging Policy (SSP) is established to regulate the relative timing of development and facilities. Approved and adopted community master and sector plans regulate the amount, pattern, location, and type of development in the county. The SSP tools promote smarter growth and assure that sufficient funds are available to serve areas where growth is approved.

The Public Hearing Draft Subdivision Staging Policy Staff Draft report was published on June 15, 2012 and posted on the Planning Department Web page. A public hearing was held on June 28, 2012 to receive testimony on the proposed policy. This memo responds to testimony on the School test and Local Area Transportation Review (LATR).

**Summary**

**Staff Recommendation: Discuss the 2012-2016 Subdivision Staging Policy elements for public school facilities and Local Area Transportation Review. Develop Planning Board consensus on the staff recommendations. Final Planning Board action will be taken at a later worksession.**

This memo contains a matrix that summarizes the testimony received at the public hearing on the Schools Test and recommended changes to the Local Area Transportation Review (LATR) standards in the Subdivision Staging Policy and the staff response to the testimony. The text of the memo gives additional background and rationale for the staff response. The relevant recommendations from the Subdivision Staging Policy are reiterated at the end of this memo for the Board’s convenience. Staff is asking for a general consensus of the Board with respect to these recommendations and any changes needed. The final recommendations will be brought back to the Board at a later worksession, along with the draft Subdivision Staging Policy resolution, for final action prior to transmitting the Planning Board Draft to the

County Council and County Executive before August 1, 2012. A draft summary of impact tax revenues and expenditures, PAMR mitigation and School Facility Payments is attached for information.

Additional SSP worksessions are scheduled as follows:

- July 19, 2012 – Worksession #2 Transportation Policy Area Review and Impact Tax recommendations.
- July 23, 2012 – Worksession #3 Transportation Policy Area Review and Impact Tax recommendations continued.
- July 26, 2012 – Review of final recommendations and transmission of Planning Board Draft to County Council and County Executive.

**Public School Facilities**

Relevant testimony regarding public school facilities delivered at the June 28<sup>th</sup> SSP public hearing is summarized in the matrix below. Following the matrix is a more detailed explanation of staff’s response to the testimony. And, attached is a summary of impact tax, PAMR and school facility payment collection information.

<b>2012-2016 Subdivision Staging Policy</b>				
<b>Issue #</b>	<b>Policy Recommendation, page</b>	<b>Testimony</b>	<b>Staff response</b>	<b>Board decision/date</b>
<b>Public School Facilities</b>				
1.	Allow the Planning Board to make a mid-cycle finding of school adequacy. <b>(SSP recommendation #10, page 39)</b>	<b>R. Harris, B. Kauffman, and S. Robbins:</b> Eliminate the school queue of potential residential development retaining the results of the annual school test for the entire fiscal year. The recommended mid-cycle review authority would be unnecessary.	<b>Staff believes the school queue provides a useful service in tracking potential changes to capacity as the result of significant residential development within a fiscal year. The current SSP resolution requires the Planning board to recognize changes in school capacity brought on by development approvals; recommendation #10 allows the Planning Board to also recognize changes in school capacity brought on by funding of additional facilities.</b>	
2.	Retain the threshold for a school facility payment at school utilization greater than 105% and less than 120%. <b>(SSP recommendation #7, page 36)</b>	<b>B. Kauffman:</b> Eliminate the school facility payment.	<b>When school utilization exceeds an unacceptable level (105%), the school facility payment provides a mechanism for development to proceed whereby funds are directed to capacity improvements in the affected area.</b>	

## **Discussion of Issues Raised in Public Testimony**

1. A relatively new component introduced in the 2007-2009 Growth Policy is the administration of a school capacity ceiling, commonly referred to as the School Queue. If a subdivision would cause a cluster to exceed the 120% threshold at any level, only the number of dwelling units that would reach the threshold would be allowed. Similarly, if a subdivision would cause a cluster to exceed the 105% threshold at any level, then the number of dwelling units which would exceed the threshold would make a School Facilities Payment to proceed to approval.

Over the past few years, in case of clusters that exceed the 120 percent threshold for moratorium, the County Council has included “placeholder” capital projects in the adopted CIP when it is known that a capital project that resolves the cluster utilization issue is in the works. This is the case when facility planning is underway, but the request for design and construction funds has not yet been determined. The “placeholder” capital project essentially promises support for the full project when it is placed in the following year’s CIP. This strategy has been successful in avoiding moratoria in recent years.

In the fall of 2009, a “placeholder” capital project was approved for three school clusters to resolve ongoing moratoria. For these clusters to come out of moratorium, the Planning Board would need to conduct a test similar to the annual school test. To accomplish this, the 2009-2011 Growth Policy gave the Planning Board the authority to make a one-time mid-cycle finding of school adequacy for FY2010. Since the school queue monitors adequacy during the fiscal year, there is the potential for a cluster to enter a moratorium between annual school tests. Providing the Planning Board the authority to make a mid-cycle finding of adequacy would allow the Board to respond to any County Council approved “placeholder” capital project.

2. The school facilities payment is a payment that a developer pays, on a per-student basis, when proposed development is located in a cluster that is considered inadequate. The payment is levied only at the school level deemed inadequate. The 2007-2009 Growth Policy set the school facilities payment at 60 percent of the cost-per-pupil of infrastructure. The school impact tax is set at 90 percent of the per pupil cost. Staff does not believe development is being double-charged by requiring both the impact tax and the school facilities payment in clusters that are in deficit as the school impact tax is development's contribution to school facilities countywide and the school facilities payment is development's requirement when school capacity is not adequate while allowing development to proceed.

## **LATR**

Three (3) items pertaining to this element of the SSP are addressed in this memo.

1. Relevant testimony regarding LATR delivered at the June 28<sup>th</sup> SSP public hearing is summarized in the matrix below.

2. A technical memo which summarizes recommendations for changes/revisions to the Department's current LATR process. A key recommendation in this regard is to incorporate the Highway Capacity Manual (HCM) 2010 methodology (i.e., queuing and delay analysis) at intersections in the County where the Critical Lane Volume (CLV) exceeds 1600. (See LATR recommendation #7.) This recommendation is a refinement of recommendation #5 presented on page 35 of the SSP. The intent of this refinement is to apply the HCM 2010 methodology in a judicious manner in order to reflect those circumstances where intersections are approaching inadequate conditions from an operational, rather than a policy, standpoint.
  - a. ***Incorporate HCM 2010 methodology at intersections in urban and suburban policy areas where the CLV is greater than or equal to 1600.*** Develop GIS mapping of existing CLV and HCM volume-to-capacity ratios for all signalized intersections in the County to assist with study scoping in determining locations where HCM analysis is required.
    - i. Issue: The CLV has limited capabilities to account for intersection operations (e.g. signal phasing/ timing/ coordination) as well as pedestrian compatibility. Additionally, in the CLV method, the maximum capacity of the intersection is fixed; i.e. it does not vary with signal timings, grades, lane widths, etc. which limits the ability to accurately evaluate system management and operations strategies. Very few agencies surveyed use the CLV, and the HCM allows for use of state-of-the-practice analysis software and industry standard performance measures.
    - ii. Rationale: Implementing a tiered approach, and using the CLV as a screening tool allows for keeping a well- known and well-understood analytical tool, and minimizing analysis effort in locations where congestion is not an issue. Incorporating HCM 2010 allows for intersections that are approaching capacity, per the CLV standard to document the level of service of all travel modes. However, it is recommended that to create a parallel to the CLV, volume-to-capacity ratios be utilized in three categories: 1) over capacity, at capacity, and under capacity. The allowable v/c ratio can be set at a policy area level and/ or Metro area/ urban/ suburban tiers.
  
1. A PowerPoint presentation which provides an overview of the LATR Study as well as a discussion of the key findings and recommendations of this effort. This PowerPoint covers the following items:
  - **State of the Practice** – A survey of the traffic impact study practice of peer jurisdictions was conducted will be discussed.
  - **Interagency Working Group** – A stakeholders group consisting of local agencies, transit providers, advocacy groups, and traffic consultants was assembled to review and monitor this work will be described.
  - **Beta Testing of Alternative Traffic Study Methodologies** – Alternative traffic analysis methods (including the Department's current LATR process) were applied to hypothetical traffic impact study in the Chevy Chase Lake area. The key aspects of this effort will be discussed.
  - **Key Findings** – The pros and cons of the alternative traffic study methodologies will be discussed.

- **Policy Revision Recommendations** – Key proposed changes to the Department’s current LATR process will be presented and discussed.

While staff is not asking for the Planning Board’s approval of all the policy recommendations proposed by the consultant at this time, the staff may discuss these recommendations at the worksession as background for the LATR discussion and next worksession on TPAR if time permits.

<b>2012-2016 Subdivision Staging Policy</b>				
<b>Issue #</b>	<b>Policy Recommendation, page</b>	<b>Testimony</b>	<b>Staff response</b>	<b>Board decision/date</b>
<b>Local Area Transportation Review</b>				
1.	Analyze queuing & delay where traffic volumes exceed 85% of CLV standard ( <b>SSP recommendation #5, page 35</b> )	<b>R. Harris:</b> Proposed changes with respect to this aspect of LATR are unknown.	<b>The CLV threshold to be used as a trigger for queuing &amp; delay analysis is under review by staff. A revised version of this recommendation will be presented and discussed at the July 12 SSP worksession. See attached July 5, 2012 technical memorandum, recommendation #7.</b>	
2.	Analyze queuing & delay where traffic volumes exceed 85% of CLV standard ( <b>SSP Rec. #5, page 35</b> )  Develop appropriate volume to capacity standards for intersections where queuing and delay are analyzed. ( <b>SSP Recommendation #6, page 35</b> )	<b>S. Elmendorf:</b> Establish a discount for “pass-through” traffic at intersections located along US 29.	<b>“Pass-through” traffic (i.e., traffic originating outside Montgomery County) is a variable associated with traffic conditions at many intersections throughout the County. It would be difficult to rationalize the restriction of the application of such a discount only to US 29 intersections. Moreover, many US 29 intersections are planned or programmed for grade separation improvement.</b>	

## Summary of Recommendations:

### Local Area Transportation Review

5. ~~Require applicants to analyze queuing and delay at intersections where traffic volumes exceed 85 percent of the Critical Lane Volume standard, per the applicable policy area standard. Incorporate the Highway Capacity Manual 2010 methodology at intersections in urban and suburban policy areas where the CLV is greater than or equal to 1600.~~
6. Develop appropriate volume to capacity standards for intersections where queuing and delay are being analyzed.

### Public School Facilities

7. Retain the threshold for a school facility payment at school utilization greater than 105 percent and less than 120 percent.
8. Retain the threshold for school moratoria on new residential subdivisions and construction when at school utilization is greater than 120 percent.
9. Update the school facility payment rates to reflect the most recent school construction costs available.
10. Allow the Planning Board to make a mid-cycle finding of school adequacy.
11. Retain the current De Minimis exemption, which allows the Planning Board to approve a subdivision in any cluster where public school capacity is inadequate, provided the subdivision consists of no more than three housing units and the applicant commits to pay a school facility payment as otherwise required.
12. Modify exemption for senior housing such that the Planning Board may approve a subdivision in a cluster where school capacity is inadequate, provided the subdivision consists entirely of housing and related facilities for elderly or handicapped persons or housing units located in an age-restricted section of a planned retirement community. Currently this exemption is restricted to only those units that are multifamily units.
13. Retain all current waivers of the school facility payment as currently regulated under Chapter 52 of the Montgomery County Code, which includes a waiver for projects located in an enterprise zone (Wheaton CBD and Long Branch) or former enterprise zones as well as a waiver for moderately priced dwelling units (MPDU's) built under Chapter 25A.

### Attachments:

1. Memorandum: Impact Tax, PAMR, and School Facility Payment Rates, Revenues and Expenditures, July 6, 2012.
2. LATR Technical Memorandum, July 5, 2012

3. LATR PowerPoint Presentation, July 12, 2012

MD/EG/PD/kr

**DRAFT 7/6/12**

**Transportation and School Impact Taxes, PAMR Payments, and School Facility Payments: Rates, Revenue and Expenditures**



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# Transportation

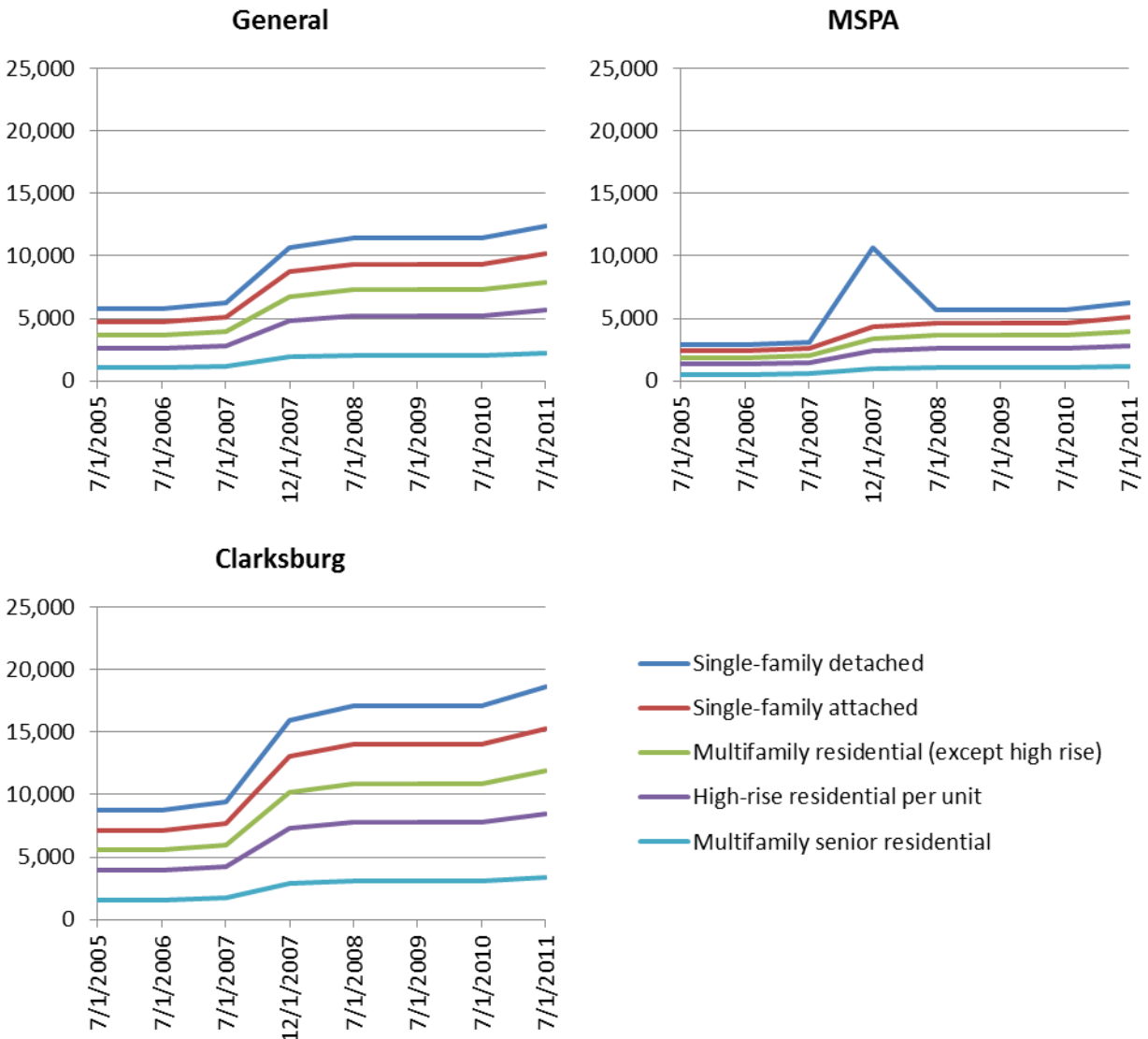
## Impact Taxes

### Background and Purpose

Impact taxes were set up as a way of taxing new development their share of master plan facilities. Impact taxes had to go toward master plan facilities that added capacity like widening roads, building a new one, etc. Initially there were only two impact tax areas—“Germantown” and “East County.” Later, “Clarksburg” was added. From July 2002 through February 2004 a “County District” received revenue. From March 2004 onward, the County District was divided up between “General” and “Metro Station Policy Areas” (MSPA). Currently revenue from Clarksburg impact taxes stay in Clarksburg—likewise with MSPAs. General impact tax revenue can be applied to any number of projects throughout the county.

### Rates - Residential

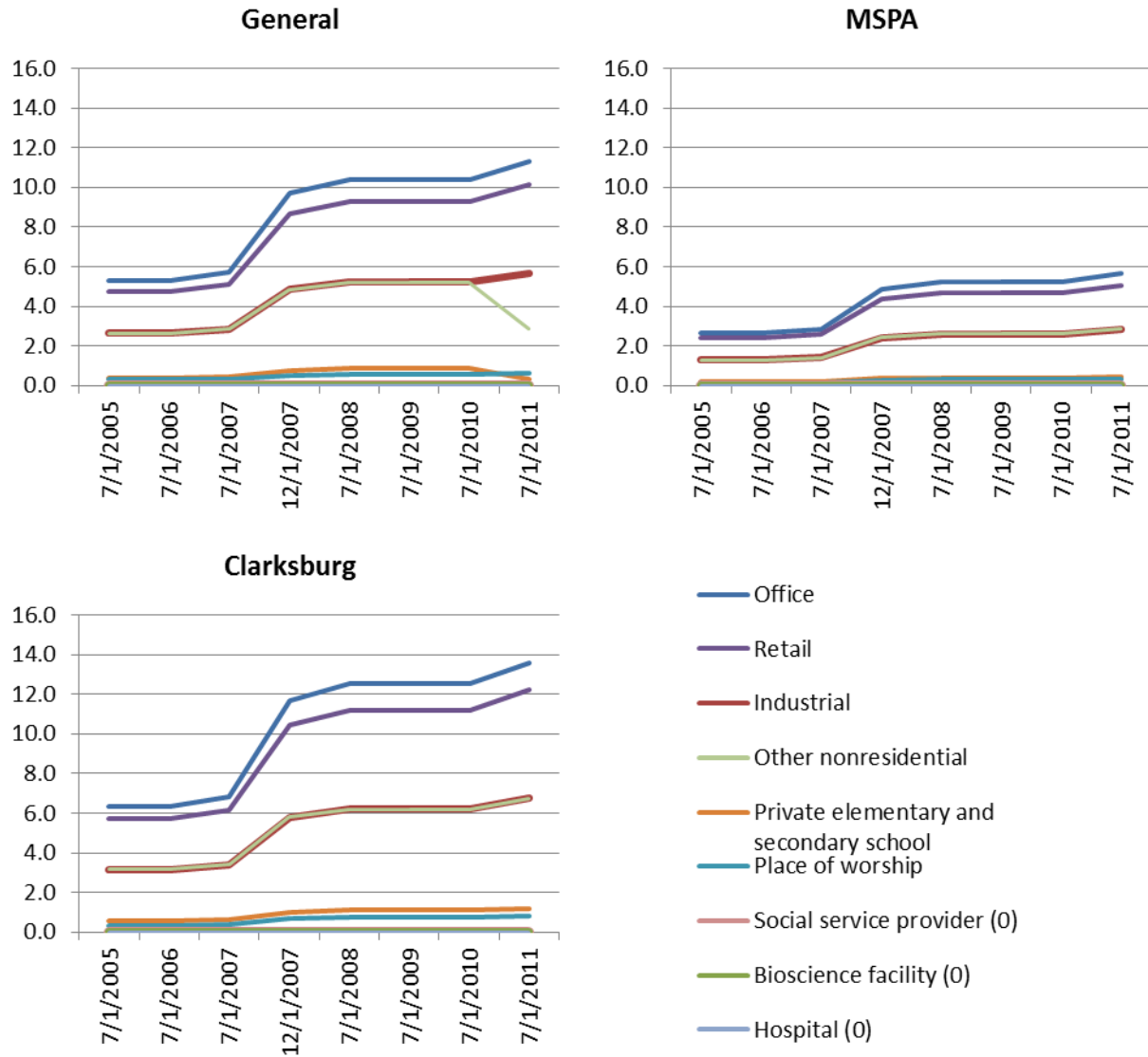
Below is a history of changes in non-municipal impact tax rates per residential unit (Rockville and Gaithersburg have their own rates and revenues).



Each geographical area (General, MSPA, and Clarksburg) has a separate tax rate for (from greatest to least) single-family detached, single-family attached, multifamily residential (except high rise), high rise residential, and multifamily senior residential.

### Rates – Nonresidential

Below is a history of changes in non-municipal impact tax rates per nonresidential square foot.



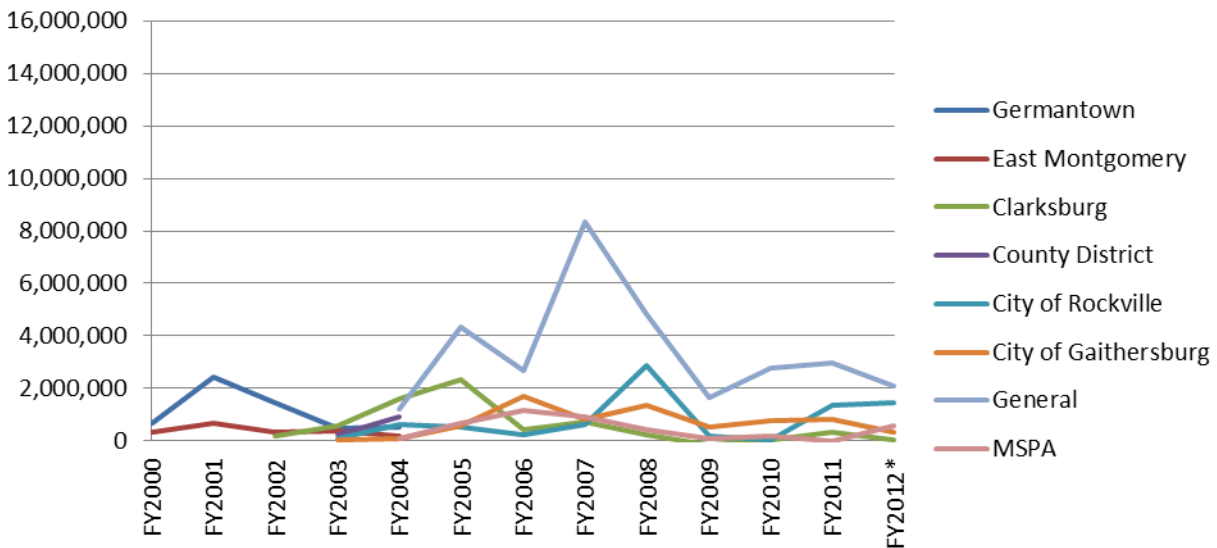
Each geographical area has a separate tax rate for (from greatest to least) office, retail, industrial, other nonresidential impacts, private elementary and secondary school, and place of worship. Social service providers, bioscience facilities, and hospitals do not pay impact taxes.

For both residential and nonresidential development, Clarksburg rates are higher than General rates, and MSPA rates are significantly lower than both of these. Residential rates for transportation impact taxes are not as high as rates for school impact taxes (see Schools section below).

Rates have rarely decreased, but usually increases are gradual—presumably with calculations of higher construction costs for transportation improvements. Typically increases occur at the beginning of a fiscal year, though some rates can stay steady over multiple-year periods. However major changes to impact tax law occurred in 2007 with biennial adjustments for changes in construction costs occurring in 2009, and 2011. The only time a rate has gone down between FY2005 and FY2012 is the single-family detached rate for MSPAs. After a significant hike in December of 2007, the following July the rate went down to be similarly proportionate to the other residential unit types as it was before the hike.

### Revenue

The following chart shows the historic revenue of all impact tax funds. Only General, MSPA, Clarksburg, and the two municipalities' impact rates still exist. Generally the different funds get greater revenue the greater the geographic size and the level of development activity occurring within that area. Unlike schools impact taxes, which have shown a steady increase in revenue since the large rate increases of late 2007, transportation impact tax revenue seems to follow the real estate market, with a peak in FY2007 and sharp decline due to recession and years of slow recovery.

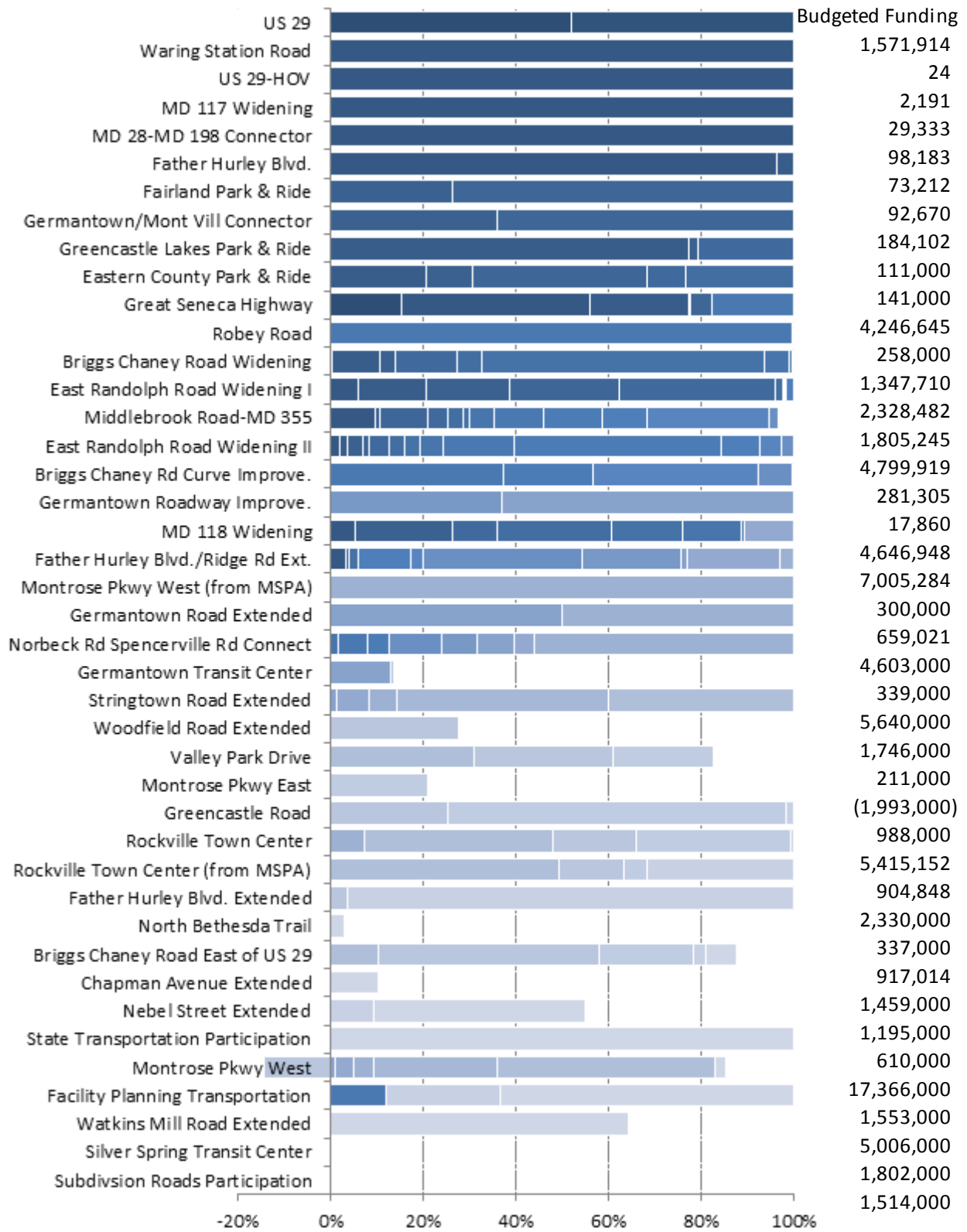


\*Revenue for FY2012 is incomplete. Collections are from July 2011 through March 2012

### Expenditure

The graph below depicts transportation impact tax allocation toward transportation Capital Improvement Projects (CIP) from FY1987 to FY2012. The earlier the fiscal year allocation, the darker the color. Many CIP projects have reached their goal for impact tax contributions, the lower ones on the list tend to be more recent and thus have not reached their goal.

## Transportation Impact Tax Allocation



The transportation impact tax is just a small fraction of the total funding that goes into transportation CIP projects. General Obligation Bonds and state funding are among the top contributors to these improvements.

## PAMR

In addition to impact taxes, PAMR identifies policy areas where the level of service is such that it requires additional mitigation. If there is not enough transportation capacity to meet the needs of existing and new development, the development must make transportation improvements or pay a mitigation fee. The types of mitigation allowed are prescribed in the Subdivision Staging Policy resolution.

## Direct Improvements

The following is a list of developments verified as constructing PAMR improvements.

Project Number	Project Name	Improvement	Improvement Status
MR2007503	Homeless Shelter	bus pad on Gude Dr.	built
12002056A	Wendy's Colesville	fully reconstruct approx 300 linear feet of Vital Way to the south of Randolph Rd. along the property frontage per the White Oak MP	built
11999043C	Fishers Lane / Spring Lake Park	contribute 261,000 towards MNCPPC CIP project 048703 - Rock Creek Trail Pedestrian Bridge over Veirs Mill Rd.	built
470270 (Building Permit)	Wheaton Hills Bldg 4	ADA Ramp for east-west movement of Grandview Ave and Kensington Blvd. north end ADA Ramp for east-west movement of Reddie Dr and Bucknell Dr on southern side	built built
120080210	1050 Ripley Street	extension of Ripley St. by 400 ft. from current terminus to Bonifant St. installation of 15ft wide shared ped/bike path along south side of Ripley extension.	nearly complete nearly complete

Many more PAMR in-lieu payments and improvement projects have been approved as part of subdivisions or site plans and remain to be completed. PAMR has been in effect since 2007, but many projects are still well within their APF validity period.

## In-Lieu Payments

The following is a list of developments verified as contributing funding toward transportation improvement projects as PAMR mitigation. In some cases the improvement the funds were applied to is known and the status of that improvement is listed. In all, the County has received \$493,800 in PAMR in-lieu payments. WMATA has received a direct payment of \$63,600 for real-time bus transit information signs.

Project Number	Project Name	Fee	Payment		Paid to	Applied to	Improvement Status
			Status				
11989271A	Wildwood Manor	\$ 55,000	paid		County	ADA ramps	built
120070610	Towhouses at Small's Nursery	\$ 22,000	paid		County	unknown	unknown
120090060	Monty	\$ 22,000	paid		County	unknown	unknown
820090020	Pike Center	\$ 77,000	paid		County	unknown	unknown
820100130	Olney Safeway	\$ 154,000	paid		County	unknown	unknown
S-2822	Siena School	\$ 163,800	paid		County	unknown	unknown
120080360	4500 East-West Hwy (Pearl St)	\$ 63,600	paid		WMATA	4 real-time transit info signs	unknown
<b>Total</b>		<b>\$ 557,400</b>					

## Schools

### Impact Taxes

#### Background and Purpose

Similar to general transportation impact taxes, schools impact taxes can fund school improvements throughout the county. There are no sub-county geographies for school impact taxes.

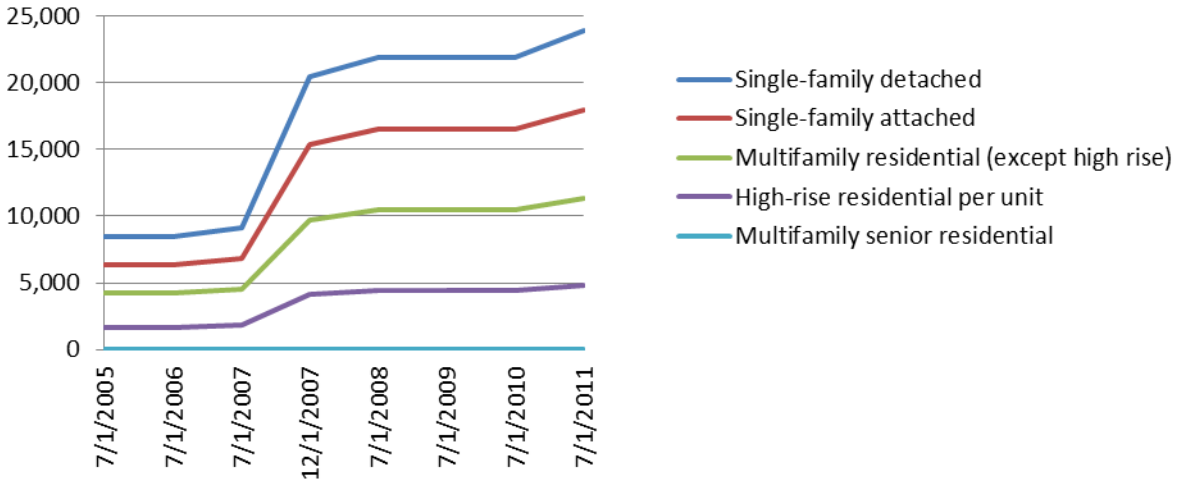
#### Rates

Because no students are generated from nonresidential development, school impact taxes only apply to developments creating residential units. Like transportation impact taxes, the school impact tax has different rates for the different unit types, however multifamily senior housing is exempt from the schools impact taxes due to the fact that they do not generate students. In addition, impact taxes are not levied on Moderately Priced Dwelling Units (MPDU). For developments containing 30 percent or more MPDUs the impact tax on the market rate units is applied at 50 percent of the standard rate.

Aside from these exemptions, all school impact tax rates have been a bit higher than even the Clarksburg residential transportation impact tax rate (the highest residential transportation impact tax rate). Similarly, however, the rates increased significantly due to law changes on 12/1/07.

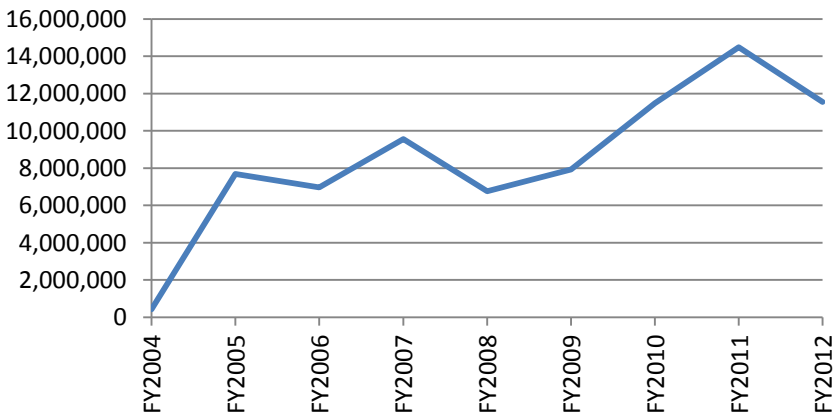
In 2003 when school impact taxes were introduced, the cost per household for building new schools was estimated to be \$10,300. The rate established in 2003 (\$8,000) was less than the calculated cost. The 2007-2009 Growth Policy aimed to more closely tie infrastructure costs to each new unit. The rate established in 2007 (\$20,456) represents 90 percent of the cost per household for building new schools. The current impact tax rate schedule, which more accurately reflects the cost of school construction and expansion associated with new development, has generated revenue to fund school buildings and additions in a more timely fashion.

### Schools (Countywide)



### Revenue

Revenue for school impact taxes has continued to climb despite economic conditions. Due to incomplete data, it is difficult to see if FY2012 revenue will keep up this trend. School revenue from impact taxes exceeds all transportation impact taxes combined in each fiscal year.



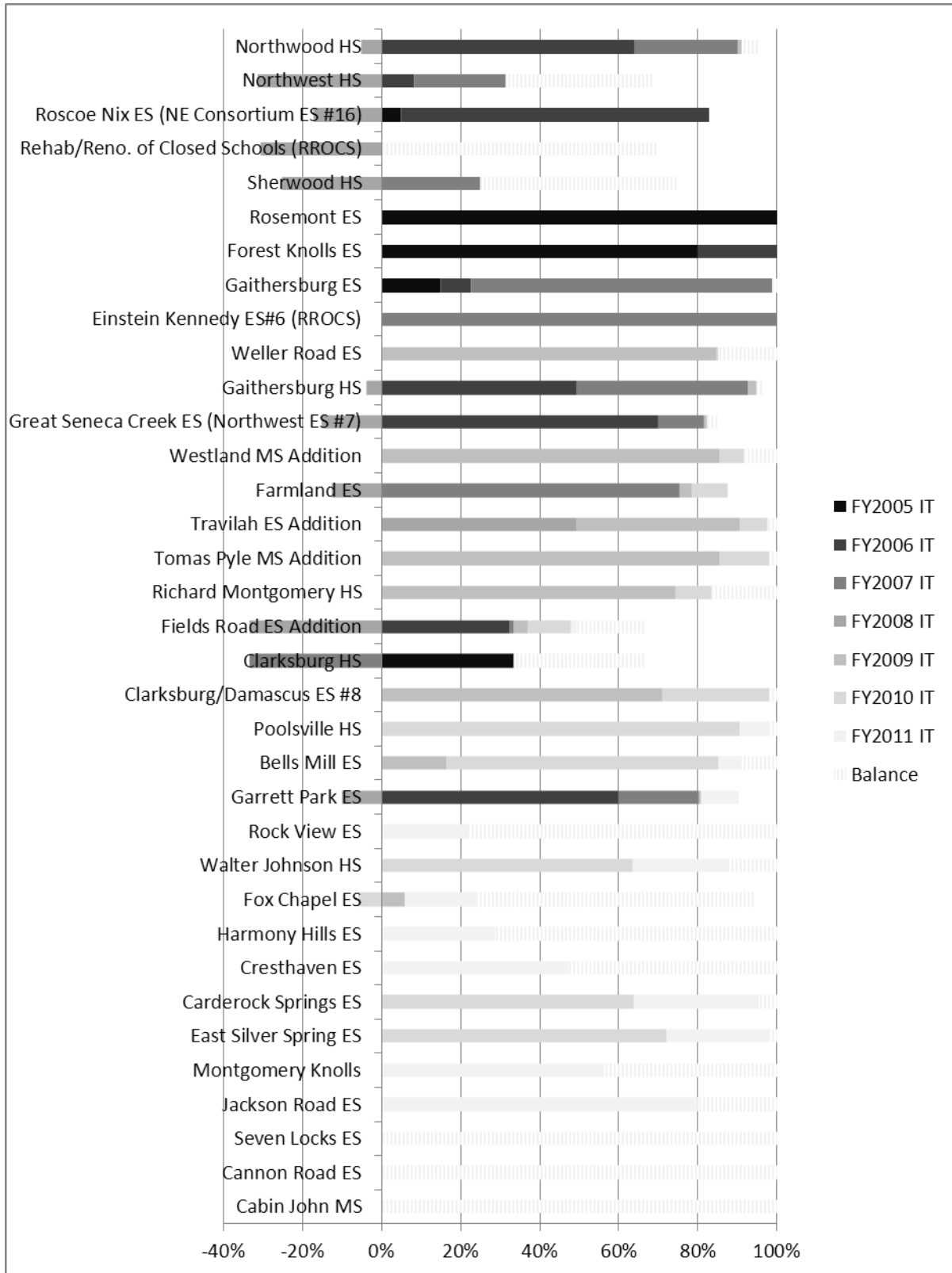
\*Revenue for FY2012 is incomplete. Collections are from July 2011 through March 2012

### Expenditures

The graph below depicts school impact tax allocation toward school CIP projects from FY2005 to FY2012. Many CIP projects have reached their goal for impact tax contributions, the lower ones on the list tend to be more recent and thus have not reached their goal. Some collections for school projects appear to have been refunded.



# School Impact Tax Allocation



With regard to the share of total Public Schools CIP Revenue from FY2011 to FY2018, Schools Impact Tax makes up 6.2 percent of all revenue sources. It contributes 1.1 percent of all countywide projects, 12.5 percent of all individual schools projects, and 14.1 percent of all miscellaneous projects. Presumably “miscellaneous projects” include facilities that are needed to avoid overcrowding, due to the presence of the Schools Facilities Payment in that sub-category.

### Funding Summary for Public Schools CIP Revenue Sources FY2011 to FY 2018

	Total (\$)	Share of Total Funds	Share of Sub-Category
<b>Countywide</b>			
Aging Schools Program	2,055,000	0.1%	0.1%
Contributions	1,104,000	0.0%	0.0%
Current Revenue: General	224,949,000	7.6%	9.2%
Current Revenue: Recordation Tax	186,831,000	6.3%	7.6%
Federal Aid	7,327,000	0.2%	0.3%
Federal Stimulus	1,624,000	0.1%	0.1%
G.O. Bonds	1,523,825,000	51.8%	62.3%
PAYGO	375,000	0.0%	0.0%
Qualified Zone Academy Funds	5,995,000	0.2%	0.2%
Revolving Fund - G.O. Bonds	648,000	0.0%	0.0%
Schools Impact Tax	26,880,000	0.9%	1.1%
State Aid	92,938,000	3.2%	3.8%
<i>Sub-Category Total</i>	<i>2,446,746,000</i>	<i>83.1%</i>	
<b>Individual Schools</b>			
Current Revenue: Recordation Tax	4,612,000	0.2%	0.8%
G.O. Bonds	443,480,000	15.1%	80.1%
Schools Impact Tax	69,167,000	2.4%	12.5%
State Aid	36,539,000	1.2%	6.6%
<i>Sub-Category Total</i>	<i>553,798,000</i>	<i>18.8%</i>	
<b>Miscellaneous Projects</b>			
Current Revenue: General	(51,522,000)	-1.8%	-12.4%
Current Revenue: Recordation Tax	64,555,000	2.2%	15.5%
G.O. Bonds	(498,487,000)	-16.9%	-119.8%
School Facilities Payment	-	0.0%	0.0%
Schools Impact Tax	58,619,000	2.0%	14.1%
State Aid	292,912,000	10.0%	70.4%
<i>Sub-Category Total</i>	<i>(57,645,000)</i>	<i>-2.0%</i>	
<b>Total</b>	<b>2,942,899,000</b>	<b>100%</b>	

## Facilities Payments

### Revenue

Fiscal Year 2012 is the only year facilities payments have been received. Payments were in two clusters.

- Bethesda-Chevy Chase Cluster= \$163,918.00
- Whitman Cluster = \$6,244.48

### Expenditure

There is no evidence that facilities payment funds have been applied to any school project. If applied, it would contribute to miscellaneous projects. Presumably “miscellaneous projects” includes facilities that are needed to avoid overcrowding. Since the school facility payment is not collected until a building permit is issued, it is only in the past year that these funds have started to accrue.

### Funding Summary for Public Schools CIP Revenue Sources FY2011 to FY 2018

	Total (\$)	Share of Total Funds	Share of Sub-Category
<b>Countywide</b>			
Aging Schools Program	2,055,000	0.1%	0.1%
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PAYGO	375,000	0.0%	0.0%
Qualified Zone Academy Funds	5,995,000	0.2%	0.2%
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G.O. Bonds	(498,487,000)	-16.9%	-119.8%
School Facilities Payment	-	0.0%	0.0%
Schools Impact Tax	58,619,000	2.0%	14.1%
State Aid	292,912,000	10.0%	70.4%
<i>Sub-Category Total</i>	<i>(57,645,000)</i>	<i>-2.0%</i>	
<b>Total</b>	<b>2,942,899,000</b>	<b>100%</b>	



## TECHNICAL MEMORANDUM

**TO:** Mr. Eric Graye, Planning Supervisor, Functional Planning and Policy Division, Montgomery County Planning Department

**FROM:** Paul Silberman, P.E. PTOE, Senior Associate, Sabra, Wang & Associates, Inc.

**REFERENCE:** **Local Area Transportation Review Policy Update Draft Recommendation**

**DATE:** **July 5, 2012**

### Introduction

This memorandum presents initial recommendations to revise the existing Local Area Transportation Review policy – including study performance, analysis methodology, and mitigation. The recommendations are based on the peer review research performed, stakeholder input, and the performance of alternative Beta tests of a transportation study for a hypothetical mixed-use redevelopment project in Chevy Chase. The Beta testing considered the following elements:

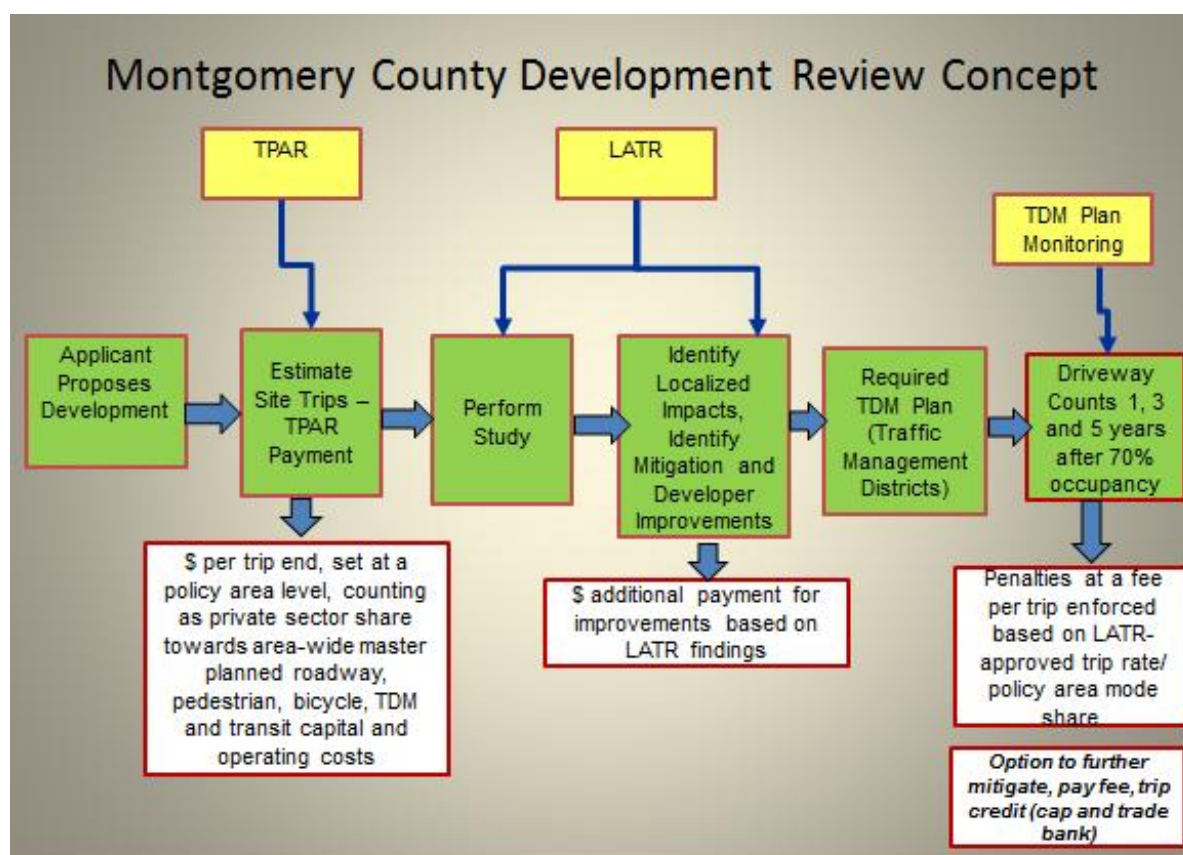
- Use of the Highway Capacity Manual (HCM) 2010 for capacity analysis
- Documentation of relative arterial mobility including average vehicle vs. bus speeds
- Analysis of pedestrian and bicycle level of service
- Safety analysis
- Consideration of growth in the traffic volumes
- Documentation of projected non-auto trips
- Non-auto travel shed analysis
- Use of traffic analysis software (Synchro/ SimTraffic) for signal timing and queuing assessment
- Use of person-throughput metrics and system-level operational measures of performance

### LATR Framework

It is the continued intent of LATR to be coordinated with TPAR as a comprehensive process, where all developments first pass through a TPAR filter to determine fees per trip, prior to completion of a detailed transportation impact study required for LATR. The focus of the LATR study is to:

- 1) Identify localized impacts of a proposed development project, as applicable
- 2) Determine mitigation needs to improve access for all modes of travel to meet policy area network performance thresholds
- 3) Determine a plan to manage demand for transportation generated by a development, specifically vehicle travel, and provide incentives to meet policy area mode share and/ or approved site vehicle trip forecasts
- 4) Develop a robust development trip monitoring program, serving as both an incentive and penalty program as well as serving to create a trip ‘bank’ and lastly provide an updated trip rate database for future transportation

A conceptual framework is illustrated below.



## LATR Recommendations

The following summarizes recommended changes to specific LATR policy and process

1. **Enter into a Memorandum of Understanding** with incorporated municipalities (Rockville, Gaithersburg and Takoma Park) that would formalize a practice to share development-related transportation study scopes, reports, and mitigation agreements among all public agencies when a development affects more than one jurisdiction.

Issue Addressed: Challenge in coordination of development review and mitigation when study areas and impacts spill across jurisdictional boundaries.

Rationale: No jurisdictional review power to be diminished, but allows for pro-active discussion of scoping parameters, analytical methodology and mitigation requirements rather than a reactive discussion.

2. **Initiate a 3<sup>rd</sup> Party Peer Review** of LATR studies by on-call consultants to be hired by the Montgomery County Planning Department, with reviewing fees to be paid by Applicants. Third party consultants can also perform scoping duties as well.

Issue Addressed: Limitations of staff resources to perform scoping and reviews, particularly in light of depth of new analysis tools and methodologies.

Rationale: 3<sup>rd</sup> Party review insures consistent and timely development impact review and frees up staff to spend more time on TPAR and other duties. Incorporation of development review fees allows the County to pass this cost through, and also allows for more transparency in the review process. It is recommended that the County contract several consultants to perform this function (as many jurisdictions currently do) to allow for maximum flexibility and avoid and conflicts of interest.

3. **Update of the LATR trip rate database as well as establish an on-going trip rate survey program.** The trip rate survey program can be funded through additional developer fees extracted to monitor TDM programs.

Issue Addressed: The LATR rates don't accurately reflect actual trip rates, due to the economy, changing travel patterns, increased modal choices, etc.

Rationale: Trip rates are the core basis and foundation of determining a development impact, LATR mitigation and TPAR fee. The cost of surveying development sites at a level robust enough to provide statistically significant new trip rates is prohibitive. By marrying this process with a new TDM monitoring program funded by developer fees, a trip rate update program can also be established. Initial trip rate surveys should focus on the most critical/ common land use types.

4. **Establish a TDM plan monitoring program.** For all developments in a Traffic Management District, applicants shall pay a monitoring fee to determine the effectiveness of their TDM measures to ensure that the policy area's mode split goal is reached and/ or approved vehicle site trip rate is not exceeded. The Applicant is subject to a monetary penalty (to be set by the Council at a policy area level and per trip rate) if a given policy area's vehicle mode split goal and/ or approved site trip rate is exceeded for each survey (maximum of one survey per year for five years) based on a randomly and third-party performed site trip survey. The survey can occur after 70% site occupancy and should include as applicable vehicle, pedestrian, bicycle, transit and parking trip rates.

Issue: It has historically been a challenge to correlate specific developer proffers offered in mitigation to actual vehicle trips. Also, it has historically been a challenge to hold developments accountable to projected vehicle trips and/ or effectiveness of developer proffers.

Rationale: A TDM plan monitoring program can provide incentives for Applicants to develop projects that are in line with the County's policy of growing denser areas of the county in a way that is sustainable, and also allow the County to better track performance measures at a development and policy level.

5. **Include major bicycle, pedestrian and transit corridors in addition to roadway corridors when scoping a study area**

Issue: Major bicycle/ pedestrian facilities and/ or transit facilities do not always align with roadway corridors.

Rationale: Provides more consistent scoping of a study area to include alternative modes of travel and thus allowances to identify gaps and barriers to non-auto travel sheds.

6. In addition to counting pedestrian and vehicle data, **collect bicycle usage data** during intersection counts. In addition, collect **transit ridership (boarding and alighting)** for transit stops adjacent to proposed development.

Support: Questions about bicycle and transit usage are frequently asked and good data has been hard to find.

Rationale: It is not a significant effort to collect this data at the same time as traditional data is collected. Having accurate baseline data for all travel modes is critical for planning in the context of its effect on other modes competing for the same public space.

7. **Incorporate HCM 2010 methodology at intersections in urban and suburban policy areas where the CLV is greater than or equal to 1600.** Develop GIS mapping of existing CLV and HCM volume-to-capacity ratios for all signalized intersections in the County to assist with study scoping in determining locations where HCM analysis is required.

Issue: The CLV has limited capabilities to account for intersection operations (e.g. signal phasing/ timing/ coordination) as well as pedestrian compatibility. Additionally, in the CLV method, the maximum capacity of the intersection is fixed; i.e. it does not vary with signal timings, grades, lane widths, etc. which limits the ability to accurately evaluate system management and operations

strategies. Very few agencies surveyed use the CLV, and the HCM allows for use of state-of-the-practice analysis software and industry standard performance measures.

Rationale: Implementing a tiered approach, and using the CLV as a screening tool allows for keeping a well-known and well-understood analytical tool, and minimizing analysis effort in locations where congestion is not an issue. Incorporating HCM 2010 allows for intersections that are approaching capacity, per the CLV standard to document the level of service of all travel modes. However, it is recommended that to create a parallel to the CLV, volume-to-capacity ratios be utilized in three categories: 1) over capacity, at capacity, and under capacity. The allowable v/c ratio can be set at a policy area level and/ or Metro area/ urban/ suburban tiers.

8. Developer must *evaluate pedestrian delay*, at all intersections in the identified walk shed, particularly when signal timing modifications are proposed.

Issue: There is currently no quantitative measure of pedestrian mobility

Rationale: Measuring pedestrian delay allows for a comparative performance measure when balancing pedestrian and vehicle performance and/ or mitigation needs based on HCM-documented tolerances of transportation system user delay. Acceptable pedestrian delay levels can be set based on policy area and/ or Metro area/ urban/ suburban tiers.

9. Developer must formally *conduct a walk shed (1/3 mile) and bike shed (2-mile) analysis* that shows connectivity and gaps sidewalk and bike infrastructure between the site and generators/destinations within the walk shed and bike shed.

Issue: There is no quantifiable definition of a study area size for pedestrian and bicycle access.

Rationale: The use of a travel shed for non-auto modes can allow for easier prioritization of off-site access improvements

10. ***Require a formal Transportation Demand Management (TDM) plans as part of the LATR report for all urban, suburban and CBD/Metro Policy areas.***

Issue: There is not enough accountability in the selection, implementation and utilization of proffers/ trip reduction strategies/ policies and tools.

Rationale: Creating a formal TDM plan, which will be unique to each development, and one that will be monitored, will encourage applicants to take the trip reduction process more seriously, and broaden the depth and breadth of TDM options.

11. ***Create a “cap and trade” trip bank for trip credits and debts.*** Developers that produce vehicle trips in excess of their vehicle mode split goal and/ or approved vehicle site trip rate can buy down trips from a bank of trip credit supplied by developers whose projects produce vehicle trips that are below the threshold for their site. If a development is under the threshold, they can apply for a trip credit and then sell the vehicle trip credits to another developer within the same policy area.

Issue: If developers are to be penalized for exceeding vehicle trip rates, they should also be rewarded for meeting policy goals.

Rationale: Allows for an alternative mitigation method for developers that exceed their projected trip generation numbers without negatively effectively the network, because vehicle trips generated by multiple developments are maintained below the aggregate projected amount. **This could also be extended to parking spaces.**

# Local Area Transportation Review

July 12, 2012



# Purpose and Need

- Response to Planning Board, Council and Executive
  - Evaluate use of more advanced traffic analysis methodology and software, including multi-modal level of service
  - Examine incorporation of metrics for non-auto travel, pedestrian/bicycle connectivity and proximity to transit service
  - Develop better accounting of travel behavior shifts at the local level
  - Evaluating refined geographic policy standards (urban, suburban, rural)



# Presentation Outline

- State of the Practice
- Interagency Working Group
- Beta Test Traffic Studies
- Key Findings
- Policy Revision Recommendations

# State of the Practice

## ➤ Peer Jurisdictions Surveyed included:

- MD - Baltimore, Rockville, Gaithersburg
- WA - Seattle, Vancouver, King County
- FL - Miami-Dade County, Miami Beach, Orlando
- Boston, MA; Alexandria, VA; and San Jose, CA

## ➤ Survey focused on:

- Process and Scoping
- Data Collection and Analysis
- Forecasting
- Mitigation

# Survey Results

- Process and Scoping

- Increasing use of a third-party consultant to scope, review or perform the traffic impact study, funded by the developer
- Several jurisdictions have an alternative review process that allows developers to pay a fee per trip and bypass performing a traffic study
- No jurisdiction had a formal policy for inter-jurisdictional coordination, good professional cooperation was the norm.

- Data Collection and Analysis

- Most jurisdictions collect traffic data on vehicles, pedestrian and bicycles. A few collect transit usage (headway and occupancy) and one jurisdiction surveyed collected travel time
- Several jurisdictions use Synchro models to 1) validate traffic count data, and 2) to account for oversaturated conditions (actual demand vs. throughput).
- All but two jurisdictions (Gaithersburg and Rockville) use the HCM methodology to determine level of service.

# Survey Results

- Most jurisdictions only require vehicle level of service. The City of Seattle has performed pedestrian level of service analysis, and the City of Boston is considering a complete street multi-modal analysis requirement. Vancouver Washington also uses arterial travel speeds to assess existing operational performance.
- Forecasting
  - The City of Baltimore and Boston use mode share data from the regional travel demand model in accounting for discounts in raw vehicle trip generation rates for pedestrian, bicycle and transit site access.
- Mitigation
  - The requirement of a Transportation Demand Management Plan is increasingly common (Alexandria, DC DOT). No jurisdiction has a formal monitoring program specifically focused on development impact, however, some require annual reports on a TDM plan which includes monitoring elements.
  - The City of Baltimore and Boston include transportation system management (such as communications and ITS) and operating contributions (e.g. transit) as part of mitigation options. Requesting reduced parking (parking maximums) was a notable tool used by Boston to reduce auto trips when recommended roadway improvements are not feasible.

# Interagency Working Group

- Stakeholders included:
  - SHA (District and Travel Forecasting)
  - County DOT (modal experts), Economic Development, Permitting Services
  - Municipalities (Rockville, Gaithersburg, Takoma Park)
  - Advocacy Groups (Coalition for Smart Growth, Action Committee for Transit)
  - Transit Providers (Ride On, WMATA)
  - Consultants (Wells and Associates, Inc., Traffic Group, ITS)
- Met four times over the study period

# Beta Tests – Policy and Analysis Considerations

- 1) Use of the Highway Capacity Manual (HCM) 2010 for capacity analysis
- 2) Documentation of relative arterial mobility including average vehicle vs. bus speeds
- 3) Analysis of pedestrian and bicycle level of service
- 4) Safety analysis
- 5) Applying growth factors to the existing traffic volumes

# Beta Tests – Policy and Analysis Considerations

- 6) Documentation of pedestrian, bicycle and transit site trips
- 7) Analysis of travel sheds for pedestrian and bicycle trips
- 8) Use of traffic analysis software (Synchro/ SimTraffic) for signal timing and queuing assessment
- 9) Use of person-throughput metrics vs. traditional vehicle throughput
- 10) System-level vs. Intersection operational measures of performance

# Beta Tests – Scope

- Chevy Chase Lake Village Mixed Use Redevelopment
  - 500,000 SF – 400 dwelling units, 60K SF office, 30K SF retail
- Report #1 – per current LATR guidelines
- Report #2 – HCM 2010, arterial mobility, pedestrian/ bicycle LOS and travel shed, crash analysis, traffic growth, simulated queueing
- Report #3 – system level operations, person-trip analysis



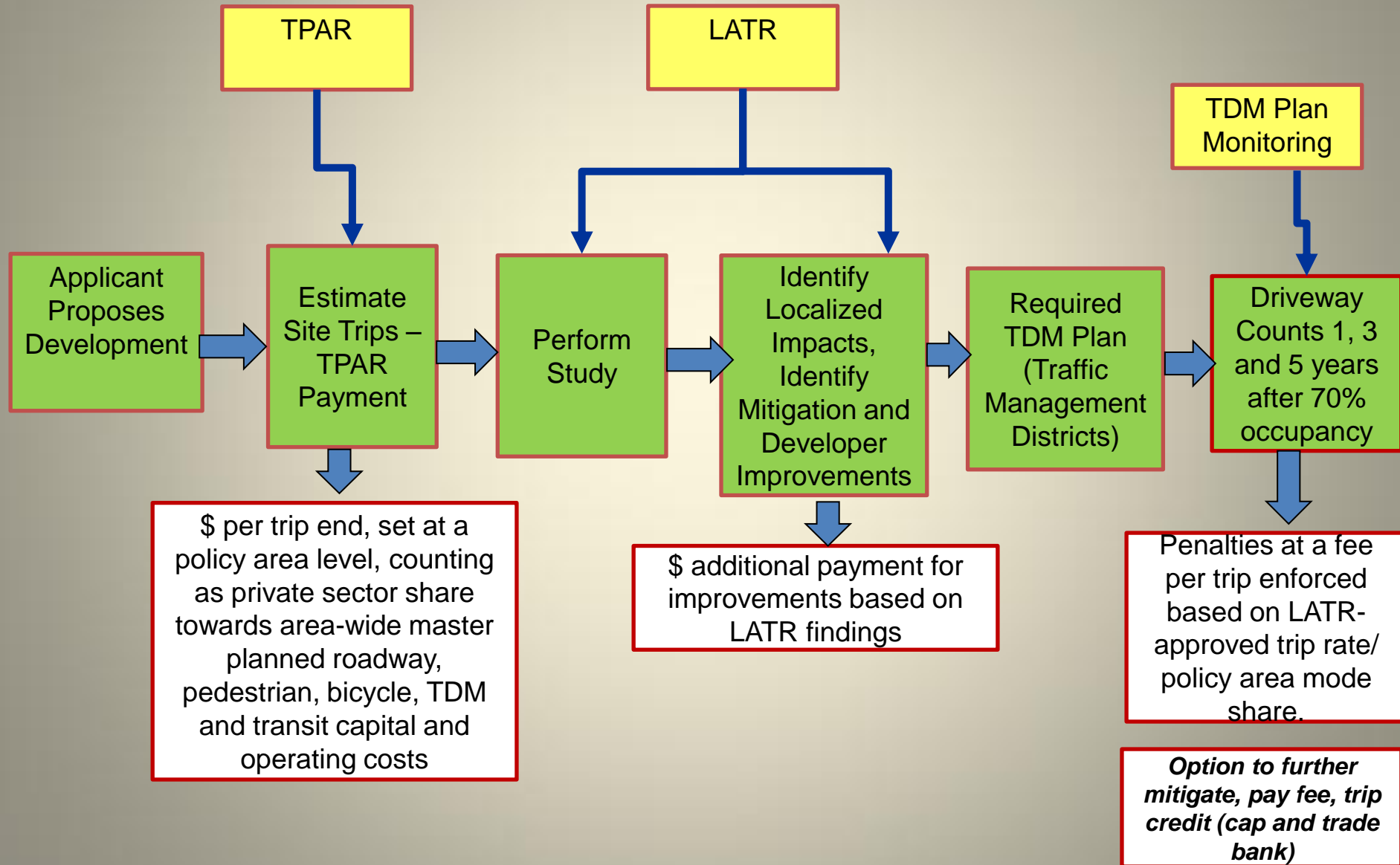
# Beta Tests – Key Findings

- More robust analysis did not change results – same intersections and impacts were identified
- Concern about translation between Critical Lane Volume and HCM Level of Service.
- Concern about additional work effort for both practitioners to produce and technical staff to review the reports would be considerable
  - Costs of performing enhanced reports will be 50% higher
- The pedestrian methodology was helpful in quantitatively providing a metric such as delay to test impacts for walking access.
- A person-trip methodology, and a system level analysis does not answer the question "what happens at my intersection"
- More accurate and updated trip rates are needed due to changing land use patterns, economic trends, and expansion of alternative transportation networks
- Can retain the CLV as a screening tool and require HCM analysis above a certain threshold of the policy area congestion standard.

# LATR Framework Objectives

- 1) Identify localized impacts of a proposed development project
- 2) Determine mitigation needs to improve access for all modes of travel to meet policy area network performance thresholds
- 3) Develop a plan to manage demand for transportation generated by a development, specifically vehicle travel, and provide incentives to meet policy area mode share and/ or approved site vehicle trip forecasts
- 4) Develop a robust development trip monitoring program with three objectives:
  - 1) Create an incentive and penalty for meeting site trip goals through fees and trip credits
  - 2) Create a trip 'bank' where developers within a policy area can exchange trip credits
  - 3) Provide an updated trip rate database for future LATR studies

# Montgomery County Development Review Concept



# Policy Recommendations

- 1) **Enter into a Memorandum of Understanding** with incorporated municipalities (Rockville, Gaithersburg and Takoma Park) that would formalize a practice to share development-related transportation study scopes, reports, and mitigation agreements
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# Next Steps

- Formal Policy Revision/ Draft Guidelines
- Work sessions and Hearings
- Approval and Adoption
- Training in new analysis software (HCM 2010, Synchro)

# Questions?

