

Growth Policy Study: Appendix J –School Capacity and Enrollment
(Resolution 16-376 F11)

Lead Staff: Pam Dunn

Summary:

- Development approval in nine school clusters will be subject to a school facility fee.
 - This is the same number of clusters required to pay a school facility fee in FY2009.
 - Three clusters moved off the school facility payment list, two falling below the 105% program capacity threshold; the other moving into moratorium.
 - Three school clusters will be in moratorium for residential development approvals.
 - The results of the FY2010 school test influenced public testimony and the Planning Board discussion of the definition of school adequacy. These discussions are reflected in Appendices M and Q.
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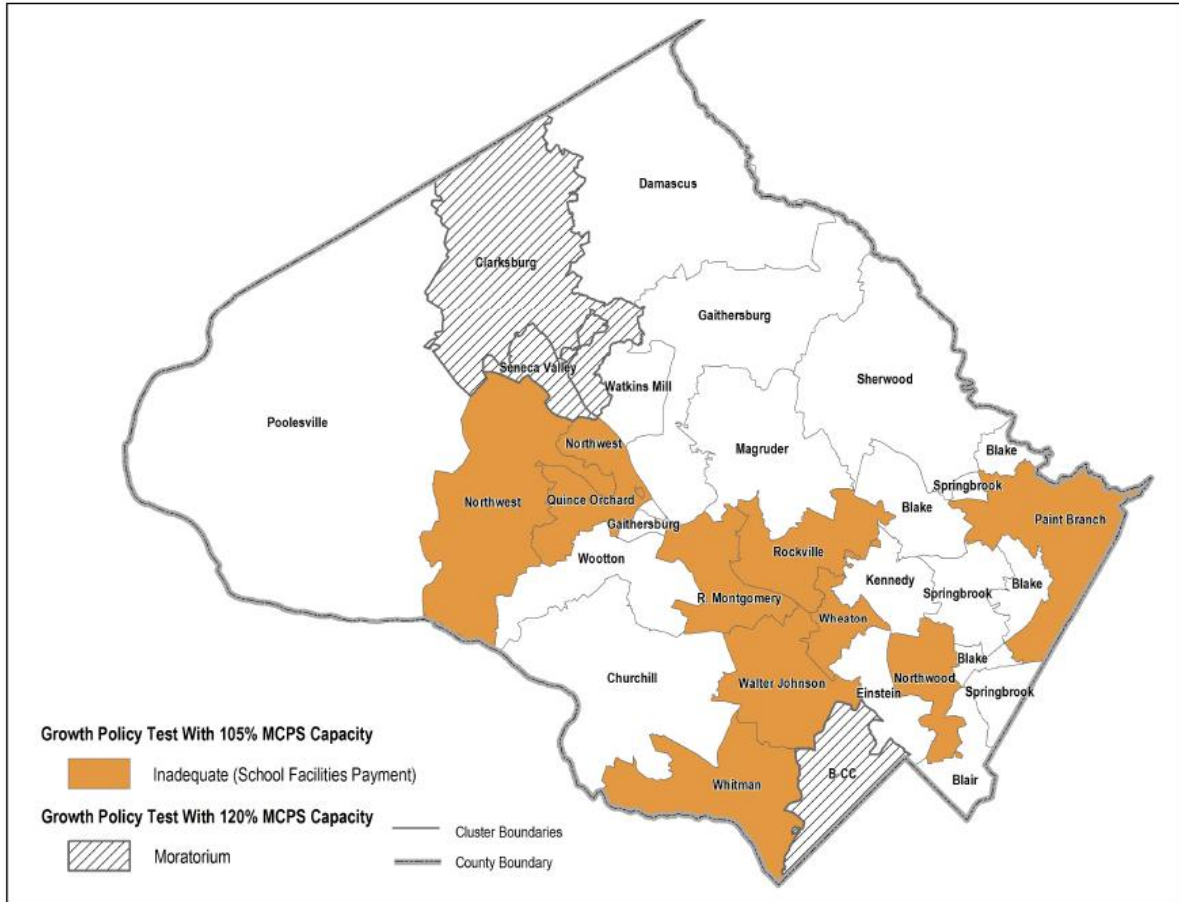
Adequate school capacity is a calculation that compares projected enrollment numbers and existing and planned facility capacity based on program needs. The annual school test determines if residential subdivisions in any school clusters should be subject to either a school facilities payment or a moratorium.

The County Council approves the school test methodology in the Growth Policy Resolution. Once the Council approves the CIP, Montgomery County Public Schools (MCPS) recalculates the projected school capacity (based on final determination of funded capacity) and provides all data for the school test as required by the Adequate Public Facilities Ordinance.

The FY2010 school enrollment and capacity information was presented to the Planning Board on June 8, 2009. For FY2010, nine school clusters will be required to make a school facility payment. In FY2009 there were also nine school clusters in which development approval has been subject to the payment of a school facility fee. The Wootton and Kennedy clusters are removed from the FY2010 list, while the Walter Johnson, Northwood and Paint Branch clusters are added. The B-CC cluster moves from the requirement of a school facility fee to moratorium. In addition, the Clarksburg and Seneca Valley clusters will be in moratorium in FY2010 bringing the number of school clusters under moratorium for development approvals to three.

The results of the FY2010 school test influenced public testimony and the Planning Board discussion of the definition of school adequacy. These discussions are reflected in Appendix M and Appendix Q.

School Test Results FY2010:



Summary of School Test for FY 2010
 Based on BOE Requested FY 2009–2014 Amended CIP
 Effective July 1, 2009

School Test Level	Description	Cluster Outcomes by Level		
		Elementary Inadequate	Middle Inadequate	High Inadequate
<u>Clusters over 105% utilization</u> School facility payment required in inadequate clusters to proceed.	5-year test Effective July 1, 2009 Test year 2014-15 Based on BOE Recommended FY 2009–2014 Amended CIP	Clarksburg (112%) Walter Johnson (108%) Richard Montgomery (119%) Northwest (120%) Northwood (112%) Paint Branch (106%) Quince Orchard (107%) Rockville (115%) Wheaton (117%) Whitman (110%)	B-CC (114%) Richard Montgomery (115%)	Clarksburg (116%)
<u>Clusters over 120% utilization</u> Moratorium required in clusters that are inadequate.	5-year test Effective July 1, 2009 Test year 2014-15 Based on BOE Recommended FY 2009–2014 Amended CIP	B-CC (137%) Seneca Valley (121%)	Clarksburg (133%)	

Cluster Percent Utilizations in 2014

Reflects BOE Requested FY 2009-2014 Amended Capital Improvements Program (CIP)

Elementary School Enrollment

Cluster Area	Projected August 2014 Enrollment	100% MCPS Program Capacity With CC Adopted FY09-14 Amended CIP	Percent Utilization in 2014	Growth Policy Test Result Capacity is:	Moratorium - Red
					School Facility Payment - Yellow
B- CC	3,588	2,617	137%	Inadequate	Yes
Blair	3,932	4,282	92%	Adequate	No
Blake	2,462	2,556	96%	Adequate	No
Churchill	2,552	2,784	92%	Adequate	No
Clarksburg	3,712	3,303	112%	Inadequate	Yes
Damascus	1,889	2,105	90%	Adequate	No
Einstein	2,487	2,587	96%	Adequate	No
Gaithersburg	3,855	3,932	98%	Adequate	No
Walter Johnson	3,649	3,444	106%	Inadequate	Yes
Kennedy	2,601	2,593	100%	Adequate	No
Magruder	2,610	2,493	105%	Adequate	No
R. Montgomery	2,586	2,171	119%	Inadequate	Yes
Northwest	4,178	3,478	120%	Inadequate	Yes
Northwood	2,968	2,657	112%	Inadequate	Yes
Paint Branch	2,452	2,309	106%	Inadequate	Yes
Poolesville	571	754	76%	Adequate	No
Quince Orchard	2,889	2,691	107%	Inadequate	Yes
Rockville	2,570	2,237	115%	Inadequate	Yes
Seneca Valley	2,296	1,901	121%	Inadequate	Yes
Sherwood	2,136	2,416	88%	Adequate	No
Springbrook	2,894	3,200	90%	Adequate	No
Watkins Mill	2,561	2,807	91%	Adequate	No
Wheaton	2,816	2,407	117%	Inadequate	Yes
Whitman	2,272	2,061	110%	Inadequate	Yes
Wootton	2,910	3,072	95%	Adequate	No

Middle School Enrollment

Cluster Area	Projected August 2014 Enrollment	100% MCPS Program Capacity With CC Adopted FY09-14 Amended CIP	Percent Utilization in 2014	Growth Policy Test Result Capacity is:	Moratorium - Red
					School Facility Payment - Yellow
B- CC	1,187	1,037	114%	Inadequate	Yes
Blair	2,015	2,261	89%	Adequate	No
Blake	1,165	1,332	87%	Adequate	No
Churchill	1,458	1,550	94%	Adequate	No
Clarksburg	1,508	1,138	133%	Inadequate	Yes
Damascus	908	941	96%	Adequate	No
Einstein	1,209	1,461	83%	Adequate	No
Gaithersburg	1,583	1,771	89%	Adequate	No
Walter Johnson	1,675	1,863	90%	Adequate	No
Kennedy	1,246	1,384	90%	Adequate	No
Magruder	1,110	1,607	69%	Adequate	No
R. Montgomery	1,123	973	115%	Inadequate	Yes
Northwest	2,036	1,966	104%	Adequate	No
Northwood	1,136	1,391	82%	Adequate	No
Paint Branch	1,271	1,308	97%	Adequate	No
Poolesville	284	472	60%	Adequate	No
Quince Orchard	1,300	1,648	79%	Adequate	No
Rockville	898	972	92%	Adequate	No
Seneca Valley	1,229	1,471	84%	Adequate	No
Sherwood	1,202	1,475	81%	Adequate	No
Springbrook	1,068	1,216	88%	Adequate	No
Watkins Mill	1,074	1,247	86%	Adequate	No
Wheaton	1,546	1,646	94%	Adequate	No
Whitman	1,208	1,267	95%	Adequate	No
Wootton	1,407	1,598	88%	Adequate	No

High School Enrollment

Cluster Area	Projected August 2014 Enrollment	100% MCPS Program Capacity With CC Adopted FY09-14 Amended CIP	Percent Utilization in 2014	Growth Policy Test Result Capacity is:	Moratorium - Red
					School Facility Payment - Yellow
B- CC	1,735	1,656	105%	Adequate	No
Blair	2,327	2,876	81%	Adequate	No
Blake	1,700	1,715	99%	Adequate	No
Churchill	1,928	1,972	98%	Adequate	No
Clarksburg	1,844	1,593	116%	Inadequate	Yes
Damascus	1,291	1,589	81%	Adequate	No
Einstein	1,553	1,613	96%	Adequate	No
Gaithersburg	1,906	2,067	92%	Adequate	No
Walter Johnson	2,087	2,275	92%	Adequate	No
Kennedy	1,565	1,838	85%	Adequate	No
Magruder	1,606	1,958	82%	Adequate	No
R. Montgomery	1,969	1,949	101%	Adequate	No
Northwest	2,173	2,151	101%	Adequate	No
Northwood	1,474	1,517	97%	Adequate	No
Paint Branch	1,956	1,899	103%	Adequate	No
Poolesville	1,054	1,107	95%	Adequate	No
Quince Orchard	1,788	1,774	101%	Adequate	No
Rockville	1,263	1,584	80%	Adequate	No
Seneca Valley	1,320	1,478	89%	Adequate	No
Sherwood	1,790	2,022	89%	Adequate	No
Springbrook	1,572	2,095	75%	Adequate	No
Watkins Mill	1,438	1,913	75%	Adequate	No
Wheaton	1,222	1,398	87%	Adequate	No
Whitman	1,650	1,891	87%	Adequate	No
Wootton	2,170	2,086	104%	Adequate	No

Growth Policy Study: Appendix K – Allocating Development Rights
(Resolution 16-376 F12c)

Lead Staff: Shahriar Etemadi and Cathy Conlon

Summary:

The Growth Policy should allow APF transportation rights for approved but unbuilt development in suburban or rural areas to be traded to an urban area site in the same policy area. This process would encourage a shift of near-term development from suburban to more efficient urban locations. In addition, the Growth Policy should allow APF school rights for approved but unbuilt development to be traded within a school cluster. This would reduce the backlog of pipeline development that may otherwise hold capacity until APF expiration several years into the future.

The Planning Board supports the transfer of APF rights for transportation and schools within limited geographic areas:

- For transportation, APF transfer can only occur to a receiving site in an Urban Area from a sending site in the same “parent” PAMR Policy Area.
- For schools, APF transfer must be within the same school cluster.

Both the transportation and school APF transfer processes are described in the following paragraphs.

TRANSPORTATION APF TRANSFER

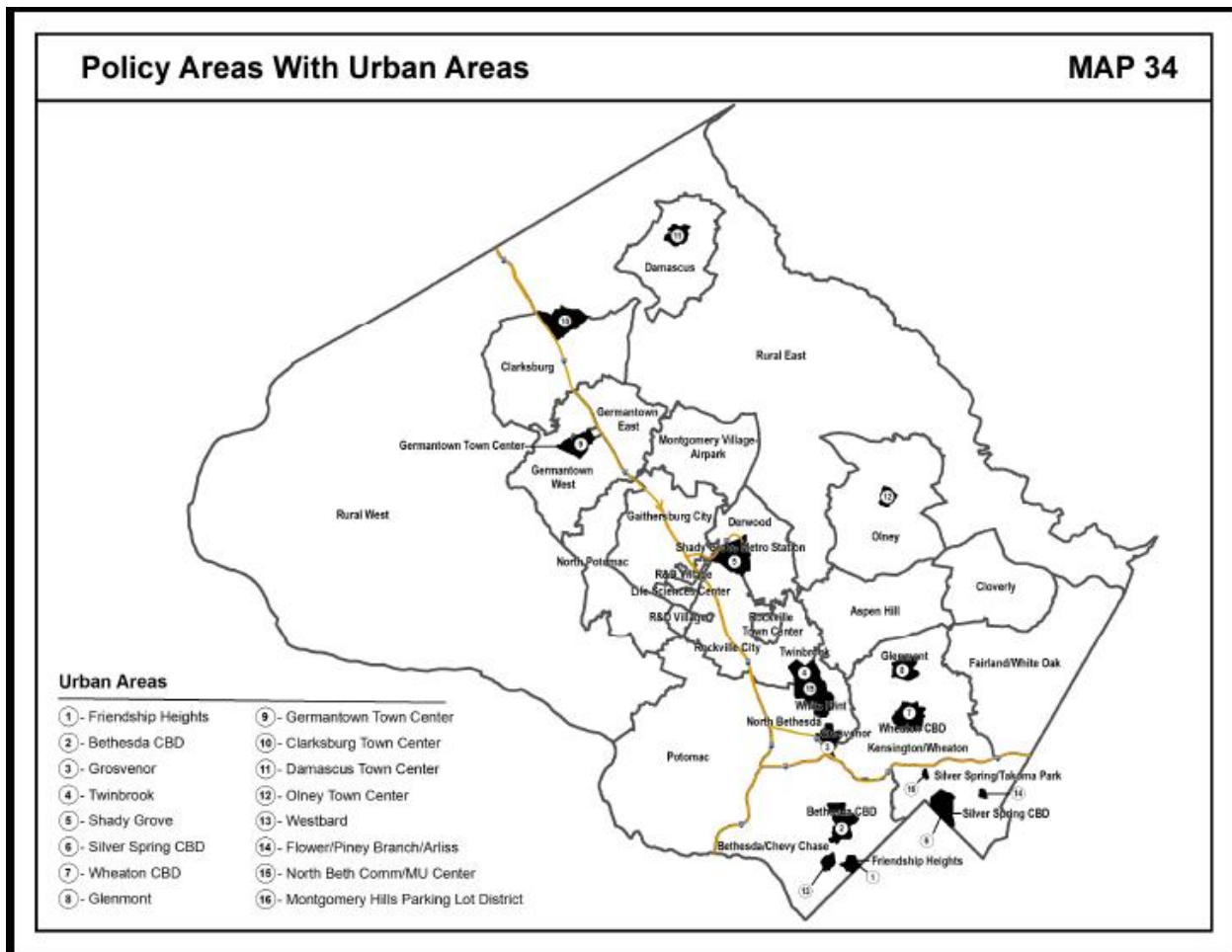
The evaluation of trading transportation APF approvals results from an interest to both streamline the provision of transportation capacity and, over time, reduce the unused backlog of pipeline capacity that requires new development entering the queue to reflect the growth of the assumed 33 million square feet of approved commercial development already in the queue ahead of them. There are two general issues to describe in this analysis:

- The geographic areas between which APF validity could be traded, and
- The administrative methods to exchange the validity

Geographic Areas

Staff recommends that APF validity should be transferable only into urban areas and from the adjacent suburban or rural portions of the same PAMR policy area the urban area is within. So, for instance, a site in Germantown West with a valid APF approval but no plans to construct within the APF validity period could trade that APF capacity to a site in Germantown Town Center. However, APF could not be transferred from Germantown East to Germantown Town Center (as they are different PAMR areas); nor could APF be transferred from Germantown Town Center (an urban area) to Germantown West as this would reduce urban area development in favor of suburban area development. Exhibit 1 shows the locations of the urban areas and their parent PAMR Policy Areas.

Exhibit 1.



Consider the recent case history for the application called Far North Village in the Germantown West policy area. Their APF validity was going to expire on November 28, 2008 and the applicant applied for extension of the validity period almost two years prior to November 28, 2008. The applicant needed the extension because they knew they were not going to implement their project within two years and they were not sure if they intend to change their design and density based on an ongoing master plan update in Germantown.

The Planning Board required the applicant to be tested for a new APF and renew it for another six years. Eventually, the applicant was tested again and obtained a new APF validity for six years. In this case, the applicant of Far North Village could trade their APF validity for the same number of vehicle trips they had obtained APF validity for to a new applicant who was ready to proceed with implementation of his/her project in Germantown Town Center.

The transfer of APF would be based on an equivalent to number of trips in both sending and receiving areas. For example if the sending location has been tested and obtained an APF approval for a development that generates 100 trips, the new location or receiving location within the urban area will receive approval for 100 trips of their development total generated trips. In case the receiving area is within an MSPA with lower trip generation rates, the transfer of the APF validity from adjacent policy area with higher trip generation rates will be equally transferred to the receiving location. For example, a 100,000 square foot office building in the Bethesda/Chevy Chase policy area generates 164 PM peak hour trips. If the APF for this building transferred to Bethesda CBD, it will be an equivalent of approval for a 110,000 square feet of office building in Bethesda CBD. The primary concern with this method would be the equity of re-evaluating transportation system requirements that were conditions of the sending development (and may have already been built). This concern should be alleviated in part by limiting the distance of the allowed transfer, only between urban areas and the adjacent policy areas.

Administrative Mechanisms

Three types of administrative mechanisms to address APF requirements for trading are described below. The Planning Board supports the APF transfer described as mechanism #1 below.

Mechanism #1: APF transfer to a receiving site in an Urban Area from a sending site in an adjacent “parent” PAMR Policy Area or APF transfer within a school cluster.

The recommended APF transfer process would require both sending and receiving area sites to concur on a joint set of preliminary plan applications to simultaneously “expire” the APF approval from the sending site and grant the equivalent APF approval for the receiving site.

Extension of the validity period could be included in the transfer process but for not more than 5 years. The applicants would need to agree on the fair market value of the transfer without any intervention from the public sector.

Transportation:

The sending site would require an approved plan with valid APF covering the amount to be transferred, including:

- Specific morning and evening peak hour vehicle trips
- Specific PAMR (and LATR, if appropriate) transportation improvement requirements, including timing requirements for construction
- Right to plat and receive a building permit(s) for the approved uses subject to the limitations of the transportation improvement construction timing

The establishment of PAMR impacts and mitigation is constant for any development in a PAMR Policy Area so that transfer of APF approval for PAMR mitigation, including any incomplete mitigation actions, has mathematical integrity (i.e., the impacts are the same throughout the Policy Area). The establishment of LATR impacts and mitigation, however, may vary substantially within any given PAMR Policy Area. Therefore, this proposal is not intended to facilitate the transfer of an APF approval that includes LATR impacts. However, the evaluation of APF transfer involving LATR effects should be evaluated on a case-by-case basis.

To transfer APF, the sending site must be platted, i.e., square footage of use(s) from which trips are being transferred must be currently buildable).

The Planning Board may extend the validity period of the transferred APF may as part of transfer, but not for more than 5 years including whatever validity remains from the test for the sending area, subject to the specifications of Section 50-20 regarding validity period extension . This approach would facilitate the transfer of APF approvals into urban areas by providing an incentive similar to the ability to extend an existing APF approval.

Transportation improvements that support the trips being sent must be transferred to /provided by the “receiving” plan or already have been constructed by applicant for the “sending” plan. The Planning Board may consider a revised construction schedule for transportation improvements that become the obligation of the “receiving” plan.

To transfer APF capacity from a sending site:

- Sending site must file a Preliminary Plan Amendment requesting voluntary retirement of its APF validity.
- Planning Board approval of the amendment must:
 - Establish the APF capacity (trips) that are available to be used on a receiving site; that is the equivalent of number of trips for the same size development in the receiving area. For example; if the receiving area is in one of the Metro Station Policy Areas with lower

trip rates, the sending area number of trips may result in a greater square footage of development in the receiving area.

- Specify the transportation improvements that must be completed by a receiving site in order for the APF capacity to be transferred;
- Require recordation of a new plat for the sending site that references the Preliminary Plan Amendment; requesting voluntary retirement of its APF validity.
- Prohibit the issuance of a building permit for any of the square footage approved for the sending site without approval of a new APF test.

To receive APF capacity from another site:

- Preliminary Plan application for a receiving site must include legal documentation, in a form that is acceptable to MNCPPC, of an agreement between the owners of the receiving and sending sites to transfer APF capacity.
- Planning Board approval of the preliminary plan must:
 - Establish the square footage based on the number of trips being received that can be built on the receiving site (through transfer or new APF finding, including PAMR and LATR as appropriate)
 - Establish the validity period(s) for the APF approval(s) of the receiving area as described in the second bullet under “To transfer APF capacity” section above;
 - Specify the transportation improvements that must be provided by the receiving site;
 - Establish a construction schedule for the required transportation improvements;
 - Prohibit recordation of the plat(s) for the receiving site until/unless a plat has been recorded for the sending site referencing the approval of a preliminary plan amendment that includes APF transfer.

Schools:

The sending site would require an approved plan with valid APF covering the amount to be transferred, including the number of students generated at each school level.

The school capacity at each school level is calculated by school cluster. Thus development within a school cluster faces the same APF restrictions.

To transfer APF, the sending site must be platted.

The Planning Board may extend the validity period of the transferred APF may as part of transfer, but not for more than 5 years including whatever validity remains from the test for the sending area, subject to the specifications of Section 50-20 regarding validity period extension . This approach would facilitate the transfer of APF approvals within a school cluster by providing an incentive similar to the ability to extend an existing APF approval, and also providing a more efficient distribution of capacity.

To transfer APF capacity from a sending site:

- Sending site must file a Preliminary Plan Amendment requesting voluntary retirement of its APF validity.
- Planning Board approval of the amendment must:
 - Establish the APF capacity (students) that are available to be used on a receiving site; that is the equivalent of number of students at each school level for the development in the receiving area. Unit type need not be equivalent across the sending and receiving sites, but the number of students generated by unit type at each school level must be such that the number of sending area students is equal to or greater than the number generated in the receiving area at each school level.
 - Require recordation of a new plat for the sending site that references the Preliminary Plan Amendment; requesting voluntary retirement of its APF validity.
 - Prohibit the issuance of a building permit for any of the units approved for the sending site without approval of a new APF test.

To receive APF capacity from another site:

- Preliminary Plan application for a receiving site must include legal documentation, in a form that is acceptable to MNCPPC, of an agreement between the owners of the receiving and sending sites to transfer APF capacity.
- Planning Board approval of the preliminary plan must:
 - Establish the number of units based on the number of students being received that can be built on the receiving site
 - Establish the validity period(s) for the APF approval(s) of the receiving area as described in the second bullet under “To transfer APF capacity” section above;
 - Prohibit recordation of the plat(s) for the receiving site until/unless a plat has been recorded for the sending site referencing the approval of a preliminary plan amendment that includes APF transfer.

Mechanism #2: Transportation improvement cap and trade

This proposal considered a process that would allow an applicant who provides more than the transportation capacity necessary to mitigate its impact, to transfer the excess transportation capacity for use of a second development or offer it “for sale” to the second applicant within the same policy area. If this policy is adopted for all areas and is not limited only to MSPAs, it encourages the applicants to provide more than necessary capacity at earlier stage of development (which means it could be provided at a lower cost). For example, the Montgomery General Hospital has received APF approval that includes construction of a transit center that provides for more than their required trip mitigation at the \$11,000 per vehicle trip basis. (Or put alternatively, their approval was obtained at a cost higher than \$11,000 per vehicle trip.) Under this proposal, the excess credit created by the applicant could be transferred to another applicant at a value to be agreed upon between the two applicants.

At the time of review and implementation of the PAMR trip mitigation projects, the county would determine how much of that PAMR project counts for the mitigation requirement for the application being reviewed and how many additional trips were mitigated that can be applied to the applicant's second development or be sold to a different applicant for their use of PAMR trip mitigation.

Staff did not propose this option due to the administrative challenge relating to the varied APF expiration dates associated with unbuilt transportation mitigation. Currently, transportation improvements required for LATR may be the responsibility of more than one applicant. Each applicant affecting a substandard transportation element, such as a congested intersection, is conditioned to make the same improvement but whoever proceeds first with implementation of their project is responsible for completing the total improvements to gain building permits. The applicant who constructs the improvement may seek compensation by other applicants responsible for the same improvement based on a pro-rata-share of their impact. The definition of pro-rata share is agreed to by the applicants themselves. The administrative challenge is that if any of the applicants fail to move forward with their participation, the value of the improvements made by the remaining applicants changes. In a worst-case scenario, the applicant who constructs the improvements may be responsible for the full cost of the improvements if the APF approvals of other applicants conditioned to make the improvements expire.

Mechanism #3: Transportation mitigation bank

In theory, a transportation mitigation bank similar to the Forest Conservation Bank (with modifications tailored for addressing the transportation facilities issues) could be set up to collect, spend, and keep track of all the resources to improve overall transportation in the county. In this model, the Montgomery General Hospital could theoretically collect a refund from the Transportation Mitigation Bank for the excess capacity being constructed. Any other applicant in the Olney Policy Area could then proceed by paying a deposit into the bank equivalent to the amount of capacity used.

Staff has three primary concerns with both the "cap and trade" and "mitigation bank" processes described as Mechanisms #2 and #3. These concerns relate to the fact that in either process, the government must be involved in establishing the value of transportation capacity in a constantly shifting market, creating an ongoing debate about values similar to that experienced with the TDR and BLT processes.

First, unlike the Forest Conservation Bank, in which the exchange rate is always acres of forest, the multimodal and geographic aspect of transportation impacts and mitigation create a public acceptance challenge that all congested intersections or transit centers can be valued equally.

Second, this complexity requires establishment of:

- exchange currency (dollars, square feet of different types of land uses, or trips/VMT),
- cash flow management (how to incorporate construction escalation costs and completion dates into the valuation process)
- effect on taxes, fees, and credits

And finally, there is a concern that these approaches would appear to the public to be a return to the days of “pay and go”.

On the other hand, the need to investigate creative infrastructure financing approaches and the equity, or “free rider” concerns associated with the fact that most infrastructure is “lumpy” suggest that the mitigation bank concept should be studied further. The concept of shared transportation infrastructure financing will be explored in the White Flint Sector Plan implementation proposals to replace LATR/PAMR exactions and taxes with a new system of assessments and fees. The carbon footprint cap and trade concepts explored in Appendix O warrant further review. And the emerging need for additional capital asset replacement and expansion, ranging from aging sewers to new transit vehicles, suggests that area-specific funding mechanisms such as a mitigation bank to fund transportation facility construction or transit systems operation should be examined in the 2011-2013 Growth Policy.

Growth Policy Study: Appendix L - Report on Current Jobs/Housing Balance
(Resolution 16-376 F12d)

Lead Staff: Eric Graye and Pam Dunn

Summary:

- The County should continue to pursue jobs/housing balance initiatives based on literature documenting the potential for reduced vehicle travel in mixed-use communities, but it should be tempered with consideration of other trip generation characteristics.
 - A preliminary analysis of a more balanced jobs/housing scenario prepared for the MWCOG CLRP Aspirations scenario indicates that countywide vehicle miles of travel (VMT) could be reduced by 16,000 VMT in a typical afternoon peak period as compared to the 2030 Round 7.2 demographic forecast. This reduction would be a step in the right direction, although the net effect is less than a one-percent change in Countywide VMT. Further review of this finding is needed, including the degree to which induced travel effects can be isolated.
 - An improved balance of jobs and housing could have a marginal negative effect on housing affordability, as housing in our commercial activity centers tends to be less affordable than that in the housing-rich policy areas. These minor effects should be considered in the continuing development of affordable and workforce housing initiatives.
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Jobs and housing units are considered to be “in balance” when there are roughly as many jobs as workers living in the County. On average, there are about 1.6 workers per household in Montgomery County, and roughly one household per housing unit. As a result, a ratio of 1.6 jobs per housing unit is considered “balanced”.

A balance of jobs and housing is intended to meet two main goals: to provide an adequate number of employment opportunities for County residents, and to minimize the distance a worker has to travel to his or her job. These goals have important secondary affects: a balance of jobs and housing helps to minimize the impact of growth on the transportation network and helps improve housing affordability through reduced transportation costs. The County’s current and forecast jobs/housing ratios are being calculated as part of the Round 7.2 forecast. These ratios will be evaluated in relationship to the new PAMR analysis. Evaluation of jobs/housing in relationship to PAMR by policy area can provide useful information on the significance of congestion thresholds or Master Plan Staging. For example, a policy area with PAMR mitigation over fifty percent and a

jobs/housing balance below .5 could indicate the need for either increased transit (due to the high proportion of households and low proportion of jobs), or prioritization of planned road improvements, or exemption from all/part of PAMR mitigation for high job growth development.

Over the past decade, the County and the region have moved to the current 1.6 jobs-per-housing unit ratio. This ratio is used by the Metropolitan Washington Council of Governments (COG). The Metropolitan Washington Council of Governments is currently developing a Constrained Long Range Plan (CLRP) “Aspirations” Scenario using the 1.6 ratio as a regional goal.

MWCOG CLRP Aspirations Scenario

The MWCOG CLRP Aspirations Scenario builds upon the MWCOG Regional Mobility and Accessibility (RMAS) Study, examining changes in both land use patterns and transportation scenarios. The RMAS study found that by shifting land uses, regional reductions in VMT of up to 1.3% could be effected.

Last fall, MWCOG has asked each jurisdiction to develop a CLRP Aspirations demographic scenario that retains the Round 7.2 jurisdictional “control” totals. Staff has developed this scenario using a set of assumptions to improve the jobs/housing balance to the extent practical at the Transportation Analysis Zone (TAZ) level while retaining the same general development totals within each TAZ as well as the Countywide totals for single-family residential units, multi-family residential units, office jobs, retail jobs, industrial jobs, and other jobs. This approach was developed in the interest of isolating the jobs/housing balance from other independent variables (such as total development levels in each TAZ) to the extent possible, rather than shifting assumed development capacity from one part of the County to another.

Table 1 shows the jobs and housing estimates for 2009, the Round 7.2 Cooperative Forecast for 2030, and the CLRP Aspirations Scenario for 2030. In general, most Policy Areas have J/HH balances that are slightly closer to 1.6 in the CLRP Aspirations Scenario than in the Round 7.2 Cooperative Forecast. The number of logical and mathematical constraints in the exercise, however, preclude all Policy Areas from moving meaningfully toward 1.6. For example, Aspen Hill has limited opportunities for commercial development, so the J/HH ratio moves only from 0.25 in the Round 7.2 forecast to 0.28 in the CLRP Aspirations scenario.

In general, the effect of the CLRP Aspirations scenario is to “shift” about 5,000 dwelling units from the rural areas and eastern parts of the County into the I-270 corridor and the urban ring and shift about 10,000 jobs in the reverse direction.

Transportation Effects

The Policy Area Mobility Review (PAMR) test has been adopted as a long-range planning tool to assess the long-range balance between land use and transportation in master plans. Table 2 presents the PAMR-related data for the scenario that assumes the 2030 Round 7.2 demographic forecast in combination with the 2030 CLRP network (including the Purple Line between Silver Spring and New Carrollton). Table 3 presents comparable data for the scenario that assumes the 2030 Round 7.2 “balanced J/H” scenario in combination with the same 2030 CLRP network.

VMT is a key component of the PAMR analysis. As can be observed, Countywide VMT (for local roadways) is only marginally reduced (by less than 1%) under the 2030 CLRP Aspirations scenario as compared to the 2030 Round 7.2 forecast. As shown in Figures 2 and 3, the CLRP Aspirations scenario reduces PM peak period VMT by about 16,000 vehicles on a typical weekday. Before proceeding further with a determination of the PAMR implications of these alternative demographic forecasts, the VMT results developed thus far warrant additional review by staff. Our preliminary findings are generally consistent with the results of the MWCOG RMAS study, but neither study has found the level of reduction solely attributed to jobs/housing balance that might be desired.

Several considerations affecting VMT reductions associated with land use changes warrant further examination. Perhaps the most significant consideration is the degree to which future jobs/housing balance examinations should consider transit-orientation along our line-haul transit systems, including Metrorail, MARC, and the CCT and Purple Line. For instance, the CLRP Aspirations scenario results in a much better J/HH balance for the Shady Grove Policy Area (the 0.98 J/HH ratio in Round 7.2 is further from the 1.6 ideal than the 1.88 J/HH ratio in the CLRP Aspirations Scenario). However, in keeping development totals constant, the CLRP Aspirations scenario resulted in a reduction of total residential units at Shady Grove (from 5,564 to 3,792), which, as an isolated example, is not an effective tool to shift transit ridership by residences.

The complexity of independent variables can complicate the interpretation of results. For instance, if households are “moved” from an area that has a lower auto ownership level (say, Aspen Hill at 1.7 cars per household) to an area with a higher auto ownership level (say, Gaithersburg and Vicinity at 1.8 cars per household), the trip generation rates per household may be adversely affected. Finally, an increased proximity of jobs and housing may shorten some trips, but the resultant roadway capacity generated may be filled by other travelers.

Table 2: 2030 Round 7.2 Forecast PAMR Table

Derivation of Year 2030 Rnd 7.2 PAMR Results by Policy Area

Policy Area	Relative Arterial Mobility					Relative Transit Mobility			
	VMT	VHT (free-flow)	VHT (congested)	Free-Flow Speeds	Congested Speeds	Relative Arterial Mobility	Average Arterial Travel Time	Average Transit Travel Time	Relative Transit Mobility
Aspen Hill	192,139	5,830	12,513	32.9	15.4	47%	40.4	52.0	78%
Bethesda/Chevy Chase	306,059	15,559	38,733	25.5	10.2	40%	31.4	39.2	80%
Clarksburg	108,435	3,509	5,916	30.9	18.3	59%	38.0	65.6	58%
Cloverly	95,485	2,391	3,541	39.9	27.0	68%	43.8	55.8	78%
Damascus	88,466	2,190	3,750	40.4	23.6	58%	48.0	87.4	55%
Derwood/Shady Grove	145,531	4,997	11,346	29.1	12.8	44%	36.7	47.6	77%
Fairland/White Oak	383,224	10,108	27,422	37.9	14.0	37%	40.0	57.8	69%
Gaithersburg City	254,930	9,225	23,068	27.6	11.1	40%	33.4	53.5	62%
Germantown East	115,126	3,886	5,941	29.6	19.4	65%	35.7	58.7	61%
Germantown West	159,260	5,288	7,936	30.1	20.1	67%	35.9	60.3	60%
Kensington/Wheaton	472,655	14,874	33,502	31.8	14.1	44%	37.2	44.0	85%
Montgomery Village/Airpark	160,688	5,365	9,071	29.9	17.7	59%	39.9	56.8	70%
North Bethesda	243,100	10,494	26,088	23.2	9.3	40%	25.9	40.2	64%
North Potomac	66,808	2,484	4,173	26.9	16.0	60%	39.8	59.9	66%
Olney	165,409	4,659	9,474	35.5	17.5	49%	46.2	60.6	76%
Potomac	199,655	5,955	15,250	33.5	13.1	39%	38.4	56.7	68%
R & D Village	70,508	3,130	6,780	22.5	10.4	46%	29.0	49.6	58%
Rockville City	277,028	11,652	29,402	23.8	9.4	40%	32.3	45.9	70%
Silver Spring/Takoma Park	275,029	10,435	24,039	26.4	11.4	43%	33.6	38.8	87%
Rural East	601,615	15,316	32,335	39.3	18.6	47%	46.0	64.2	72%
Rural West	238,539	6,480	9,449	36.8	25.2	69%	46.6	70.2	66%
Montgomery County Total	4,709,669	153,846	339,729	30.6	13.9	45%	37.0	47.9	77%

Relative Arterial Mobility measures total PM Peak Period vehicular travel on arterial roadways within each policy area
 Relative Transit Mobility measures AM Peak Period travel times for journey-to-work trips originating within each policy area
 VMT = Vehicle Miles of Travel
 VHT = Vehicle Hours of Travel

Table 3: 2030 Round 7.2 "Balanced" Forecast PAMR Table

Derivation of Year 2030 "Balanced J/H Ratio" PAMR Results by Policy Area

Policy Area	Relative Arterial Mobility					Relative Transit Mobility			
	VMT	VHT (free-flow)	VHT (congested)	Free-Flow Speeds	Congested Speeds	Relative Arterial Mobility	Average Arterial Travel Time	Average Transit Travel Time	Relative Transit Mobility
Aspen Hill	190,180	5,776	12,106	32.9	15.7	48%	39.4	52.0	76%
Bethesda/Chevy Chase	401,272	15,486	38,822	25.9	10.3	40%	31.6	39.0	81%
Clarksburg	106,417	3,460	5,706	30.8	18.7	61%	33.2	63.7	52%
Cloverly	95,028	2,379	3,488	39.9	27.2	68%	42.6	55.2	77%
Damascus	89,434	2,214	3,841	40.4	23.3	58%	42.9	89.2	48%
Derwood/Shady Grove	143,130	4,896	10,602	29.2	13.5	46%	35.1	48.1	73%
Fairland/White Oak	382,466	10,090	27,086	37.9	14.1	37%	39.1	57.6	68%
Gaithersburg City	249,526	9,324	22,571	26.8	11.1	41%	31.4	52.8	59%
Germantown East	112,375	3,868	5,724	29.1	19.6	68%	32.0	57.7	55%
Germantown West	156,968	5,313	8,006	29.5	19.6	66%	32.4	58.5	55%
Kensington/Wheaton	470,635	14,790	33,052	31.8	14.2	45%	36.8	44.3	83%
Montgomery Village/Airpark	158,918	5,307	8,917	29.9	17.8	60%	37.4	56.4	66%
North Bethesda	240,233	10,279	24,743	23.4	9.7	42%	28.1	41.0	69%
North Potomac	63,267	2,406	3,713	26.3	17.0	65%	38.3	59.7	64%
Olney	168,249	4,594	9,081	36.6	18.5	51%	43.8	60.7	72%
Potomac	196,972	5,803	14,346	33.9	13.7	40%	37.9	56.5	67%
R & D Village	70,888	3,144	6,514	22.5	10.9	48%	28.0	51.3	55%
Rockville City	288,821	11,385	28,679	25.4	10.1	40%	31.6	46.2	68%
Silver Spring/Takoma Park	273,913	10,388	23,795	26.4	11.5	44%	34.0	39.1	87%
Rural East	600,329	15,313	31,971	39.2	18.8	48%	43.5	63.4	69%
Rural West	234,831	6,379	9,087	36.8	25.8	70%	44.4	70.1	63%
Montgomery County Total	4,693,852	152,594	331,850	30.8	14.1	46%	35.6	47.4	75%

Relative Arterial Mobility measures total PM Peak Period vehicular travel on arterial roadways within each policy area
 Relative Transit Mobility measures AM Peak Period travel times for journey-to-work trips originating within each policy area
 VMT = Vehicle Miles of Travel
 VHT = Vehicle Hours of Travel

The CLRP Aspirations scenario results in shifting assumed year 2030 jobs and housing to provide better localized balances between jobs and housing, with a general shift of housing from the eastern part of the County into the I-270 corridor. Shifting housing from areas where housing is generally more affordable to areas where prices are higher might be assumed to increase average housing costs.

The net effect of the CLRP Aspirations scenario might be expected to increase average housing prices slightly, although our analysis indicates the increase might be less than 1%. Table 4 shows an analysis of the weighted average housing prices (in 2008 dollars) for the County, using housing sales for fiscal year 2008 as a base.

The FY 2008 median sales prices (combined single-family detached, single-family attached, and condo units) vary by policy area from \$302,700 in Germantown West to \$1.3 million in Darnestown/Travilah. An estimated typical sales price for the County was obtained for each of the scenarios by weighting the FY 2008 sales price for each policy area by the number of households assumed in the three scenarios.

This process yields an estimated typical sales price of \$481,800 for 2009 households. The 2030 Round 7.2 forecast average is a bit lower, at \$474,034, based primarily on the fact that future housing will have a higher mix of smaller units than the current housing stock has. The CLRP Aspirations scenario has a typical sales price of \$474,980, a very minor increase of less than one percent above the Round 7.2 scenario.