



## Transportation Policy Area Review (TPAR) Study Update

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### Description

This roundtable discussion will provide an update on the status of the Department's efforts to refine the proposed Transportation Policy Area Review (TPAR) process. TPAR is proposed to serve as a replacement for the current Policy Area Transportation Review (PAMR) area-wide transportation test. The proposed TPAR process is documented in a report released by the Executive Branch in April, 2010 found on ...

[www.montgomerycountymd.gov/content/dot/dir/cefinaltparapril222010.pdf](http://www.montgomerycountymd.gov/content/dot/dir/cefinaltparapril222010.pdf)

Subsequent to the release of this report, Montgomery County Department of Transportation staff provided a TPAR briefing to the Planning Board on July 15, 2010 ...

[www.montgomerycountymd.gov/content/dot/tpar\\_at\\_planning\\_board\\_final.ppt](http://www.montgomerycountymd.gov/content/dot/tpar_at_planning_board_final.ppt)

The Planning Board's most recent public discussion of TPAR was a roundtable with planning staff held on April 28, 2011. As a reference, the PowerPoint presentation used in support of that discussion is attached.

At the upcoming roundtable scheduled on March 8, 2012, planning staff will discuss:

- the purpose of the TPAR refinement study;
- the status of key elements of the TPAR process refinement work currently underway;
- relevant on-going coordination efforts with MCDOT staff and;
- next steps and project schedule.

This discussion will provide a backdrop for upcoming TPAR work sessions anticipated to occur in April. As a result of our more recent work, staff thinking has been evolving and we are more supportive of the benefits of a refined TPAR approach, in lieu of the current PAMR approach, than was indicated by the presentation of last April.

## Purpose of the TPAR Refinement Study

With consultant assistance, planning staff is working to evaluate the utility of a number of potential refinements to the proposed TPAR process to address the previous concerns of the Board. We have found that some of them we have been able to identify and test somewhat different refinements that appear to be more workable within our staff resources and the state-of-the-practice for carrying out these type of planning/regulatory analyses, including the following elements:

- **Alternative metrics for the transit portion of the test.** The TPAR proposed by the Executive identified three transit-related metrics or factors: (a) peak headway, (b) span of service and (c) coverage within each policy area. Other metrics that we wanted to explore included: (1) bus seat capacity (e.g., in seat-miles or seat hours) sufficient to meet demand and (2) transit travel time as compared to highway travel time for specific origin-destination pairs. The first of these other metrics is beyond the specific modeling capabilities of staff and the general modeling capabilities of the state-of-the-practice in regulatory applications. Instead, our consultant has developed a transit sketch planning approach that focuses on identifying the peak headways and spans of service for transit routes serving particular Policy Areas that, if improved, would then meet those two factors of the transit service on arterial roads. We also were able to generally test out the second of those metrics of transit travel times compared to highway travel times. While independently observed operational data has been becoming available for such comparisons, such data sources are not yet sufficiently vetted for these regulatory planning purposes. However, their use as data sources for the Mobility Assessment Report seems more suitable at this time and staff intends to continue exploring the use of such data sources on the relative performance of roadway and transit systems in the next Mobility Assessment Report.
- **Incorporation of Bus-Rapid Transit (BRT) into the transit level of service evaluation.** Staff is studying the consolidation of several bus routes in a corridor into a BRT system in which bus speeds are improved and could result in an improved level of customer service while actually reducing revenue-hours of bus service in that corridor (and therefore by extension, a policy area). We are finding means to reflect such types of service improvements within an areawide transportation review regulatory context such as the current PAMR or the proposed and refined TPAR presents analytic and staff resource challenges that are difficult and are still being considered. Firstly, it is important to consider the affects of consolidating several routes in a corridor in order to have a sufficient understanding of the sensitivity of the analysis results to changes to the peak headway (bus service frequencies on a route). Secondly, restructuring of bus routes for analysis purposes is time consuming for staff. We need to work through techniques to more efficiently restructure routes for any specific corridor that may be under consideration for inclusion in the transit network.
- **Re-structuring Policy Areas and the delineation of Possible “Core Urban Areas”.** Conforming policy area boundaries so that urban, suburban and rural definitions in TPAR better match community expectations has been noted as a desirable feature to incorporate into the TPAR process. There was an expectation that a key element of this effort would be the delineation of “core urban areas” where the provision of transit service is plentiful, land use density is high, and higher levels of congestion would be permitted. In this regard, it was further thought that

an assessment of the following TPAR congestion standards for these Core Urban Areas would be desired:

- Highways: Mid-point of level of service E
- Transit Span: Within the range of level of service A, 17-20 hours, based on Montgomery County's "Strategic Transit Plan"

The overall modeling system used in the transportation analysis affects our ability to consistently consider and assess changes such as the delineation of possible "Core Urban Areas." This analysis will be difficult to model because (1) the number of and specific boundaries of the Traffic Analysis Zones (TAZs); (2) the level of detail of representation of the minor arterials used in the modeling and how they get connected to the more major arterials and; (3) the analytic manner in which the activity center of each TAZ is connected to one or more of the minor and/or major arterials that represent the "access" to the amount and type of development activity associated with each TAZ. Staff will evaluate the sensitivity of the model to the proposed delineation.

The Metropolitan Washington Council of Governments (MWCOCG) is also in the process of increasing the number of TAZs used regionally as well as the number that will be available for use in our local application of the MWCOCG modeling system. They will also be used in future Cooperative Forecasts of development activity. Our conclusion is that we should delay performing the allocation of land use to the new TAZs until COG's work is completed.

### **Summary of Potential TPAR Refinements**

Based on a "state-of-practice" survey of peer jurisdictions, as well as discussions with MCDOT staff, a number of potential TPAR refinements have been identified, including:

- Use the Cooperative Forecasts (rather than the pipeline) for areawide review. This will yield more realistic travel patterns and transportation needs.
- Combine the analysis of the Subdivision Staging Policy Assessment against the 6-year CIP/CTP (*a "Regulatory Focus"*) with an assessment of CIP/CTP "Conditional Deficiencies" that identifies a listing of program and project options to address in subsequent CIPs and Operating Budgets (*a "Transportation Improvement Focus"*).
- Refine TPAR to have it focus on identifying "Conditional Deficiencies" once every 2 years. This practice would put more resources into analyzing and deciding on solutions that achieve adequacy more quickly and maintain it.
- Refine TPAR so that all PM Peak Period transit routes are used to measure "Average Headway".
- Implement the proposed TPAR monitoring idea (*as described on page 24 of the April, 2010 TPAR report*) to use the actual performance of arterials and the "slowness ratio" to compare to the modeled congestion measure. Test this process using fine scale Automatic Vehicle Locator (AVL) data to monitor transit speeds.

This may help in measuring the effect of future BRT service in TPAR and Subdivision Staging Policy.

### **TPAR Modeling Analyses**

Sufficient results have been derived from the transportation modeling work performed to date to support the application of TPAR in the next Subdivision Staging Policy. These results will be discussed at the roundtable relative to results obtained in support of the April 2010 TPAR report. The TPAR approach enables and requires a high degree of “transparency” of how particular the roadways and transit services are performing. With the assistance of our consultant we have been able to use this increased transparency to improve ways in which the modeling networks are specified and represent traffic conditions. As a result staff is more confident in the results of the analyses and have been finding that the TPAR approach to be beneficial. We are also finding that the TPAR approach is facilitating ways to communicate results of our analyses.

### **Coordination Efforts with MCDOT Staff**

The refinement of the proposed TPAR process is a cooperative effort shared between M-NCPPC and MCDOT staff. During the past five months, several joint inter-agency staff meetings have occurred which focused on key aspects of TPAR, including:

- evaluation of the analytical results and determination of the appropriate transportation network and demographic parameters to be tested;
- refinement of the transit elements of the test;
- determination of the fees/costs associated with the application of TPAR and;
- identification of the appropriate roles each agency should play in the application of TPAR.

### **Next Steps/Project Schedule**

To the extent resources will allow, effort will be made to evaluate the utility of incorporating BRT in the transit component of the the TPAR test. However, this effort is considered a relatively low priority given that the capital programming and implementation of BRT is likely beyond the planning horizon for the next Subdivision Staging Policy. Coordination efforts with MCDOT and Council staff will continue regarding refinements to the transit component of the TPAR test, as well as the determination of the fees associated with TPAR. Staff anticipates at least two TPAR worksessions with the Planning Board during April. The delivery of TPAR to the Council is anticipated to occur by May 18<sup>th</sup>.

Attachment

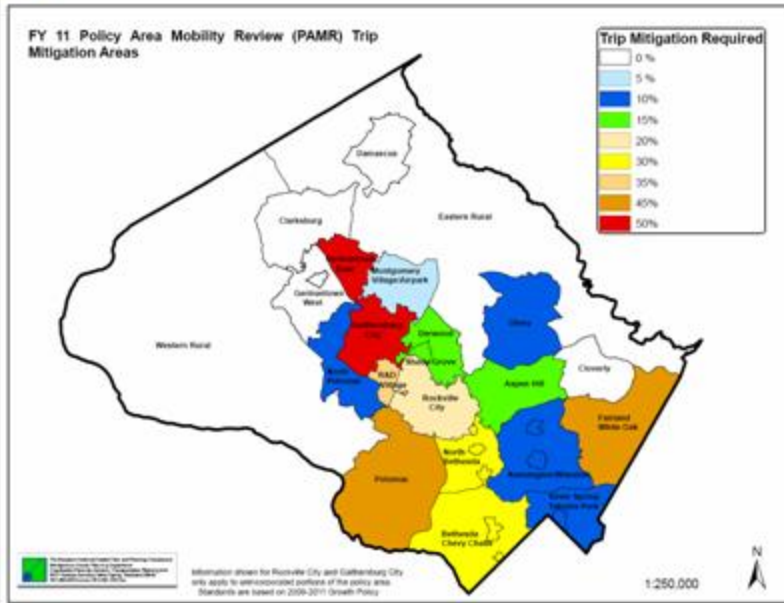
# Transportation Policy Area Review

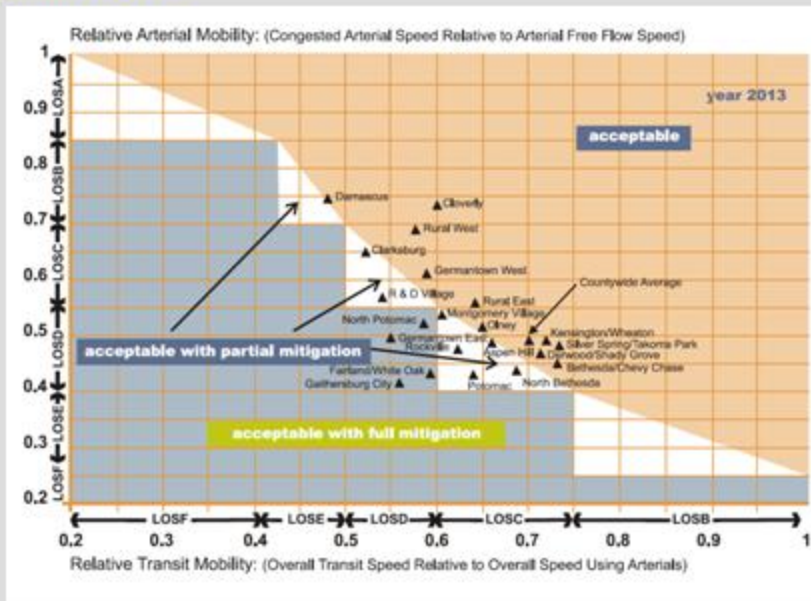
Planning Board discussion  
April 28, 2011

- 1. Forecasting “engine”
- 2. CIP / CLRP timeframe
- 3. Transit performance
- 4. Congestion policy
- 5. Costs / outcomes
- 6. Next steps



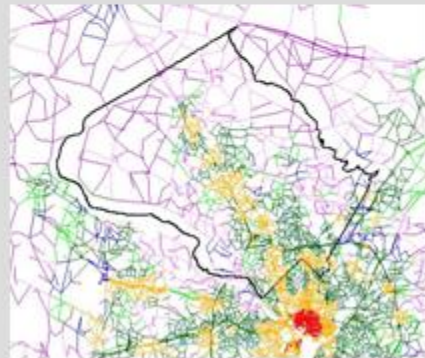
Exhibit 2.1: Parts of the Proposed Transportation Policy Area Review Process





- Retention of PAMR travel forecasting engine positive
  - Areawide performance measures
  - Application flexibility (horizon years, scenarios)
  - Process is regional, sustainable

*"A TPAR by any other name would smell as sweet...."*



- Use of longer timeframe appropriate
  - Better links CLRP land use / network planning
  - Better matches pipeline absorption rate
  - 10+ years allows candidate project implementation
  - Facilitates “proportional staging” concept
- Issues to resolve
  - Meaning of county/state commitments > 6 years
  - Process of defining candidate networks (step 15)

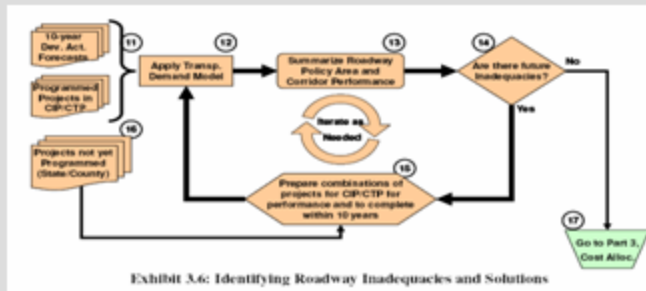
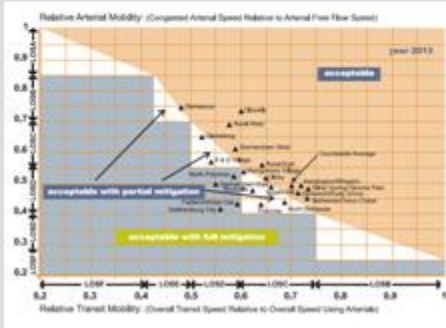


Exhibit 3.6: Identifying Roadway Inadequacies and Solutions

- Transit / roadway linkage
  - Policy or math?
  - Capacity or use?
  - Sensitive to BRT?



Transit Adequacy Analysis:				
	Number of Bus Routes	Coverage (Percent of area within 1 mi. of bus route)	Peak Headway by Bus in PM Peak (min)	Span Duration of Weekday Bus Service (hours)
<b>Urban Policy Areas served by Metrolink</b>				
Silver Spring/Takoma Park	33	96.0%	17.5	18.4
North Bethesda	14	87.4%	21.3	18.1
Kensington/Wheaton	20	82.0%	22.4	18.4
Bethesda/Cherry Chase	16	81.2%	17.8	15.3
Rockville City	13	79.0%	17.2	17.8
Clarendon	3	70.2%	20.0	14.9
Inadequate versus the Standards shown	XX-0	more than 80.0%	less than 15.0 min	more than 17.0
<b>Suburban Policy Areas</b>				
P&D Village	5	75.5%	25.0	15.7
Guthrieburg City	10	75.0%	19.3	14.4
Fairmont/White Oak	13	48.2%	19.5	13.9
Germantown West	10	48.0%	21.0	15.7
Montgomery Village/Aspark	12	47.1%	19.4	14.9
Aspen Hill	10	43.7%	18.4	15.3
Germantown East	5	39.3%	21.3	13.4
Cloverly	2	30.0%	20.1	7.9
North Potomac	7	29.2%	23.9	12.1
Olney	4	26.2%	23.3	10.4
Potomac	10	22.8%	19.1	14.3
Clarkburg	2	16.4%	30.0	10.3
Inadequate versus the Standards shown	XX-0	more than 30.0%	less than 20.0	more than 14.0
<b>Rural Policy Areas</b>				
Rural West	1	8.4%	30.0	6.3
Comanche	1	7.4%	20.0	15.7
Rural East	1	7.4%	20.0	15.7
Inadequate versus the Standards shown	XX-0	more than 5.0%	less than 30.0	more than 6.0





Transportation Policy Area Review (TPAR) – Planning Board roundtable April 28, 2011  
**SCHEDULE**

