Subdivision Staging
Transportation Recommendations

Subdivision Staging Policy
Community Meeting II
April 12, 2016

DISCUSSION TOPICS

Re-cap of 3/15 Public Meeting

Background and context

Recommended approach

Next steps and schedule

3/15 SSP COMMUNITY MEETING RE-CAP

Don't relax traffic congestion standards

Current process is "broken"

Don't see what problem(s) the SSP update is trying to fix

Transit is not a viable option (for many folks)

Average area-wide measures ignore "hot spots"

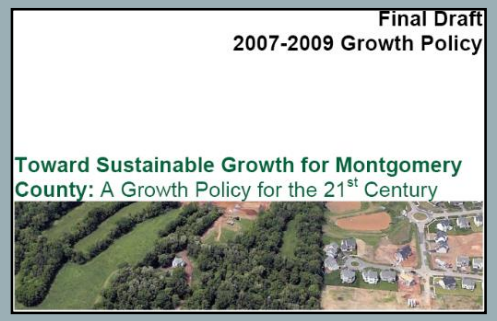
CLV is a "flawed" process

SSP changes based on "unreliable" data

Schedule follow-up pubic meeting (That's why we're here today!)

INTRO

- Overview of the Subdivision Staging Policy (SSP)
  - Transportation
  - Schools
  - Infrastructure funding
  - Schedule



INTRO

Several initiatives currently underway:

Forum on Growth & Infrastructure held on March 7, 2015.

Council-directed transportation research.

Cross-agency work group on school design options.

Meetings with the community of school issues.

Collaboration with MCPS on student generation rates.

OVERVIEW

Subdivision Staging Policy (aka Growth Policy until 2010) **is…**

Adopted every 4 years by the County Council.

Sets the rules for the administration of the Adequate Public Facility Ordinance (APFO).

Purpose is to coordinate the timing of development with the provision of public facilities – such as roads, transit and schools.

Next Subdivision Staging Policy to be adopted in 2016.

OVERVIEW

Mainly test the adequacy of the **transportation** network (roads and transit) and **schools.**

Current tools used to measure transportation adequacy:

- **Transportation Policy Area Review** (TPAR)
- **Local Area Transportation Review** (LATR)

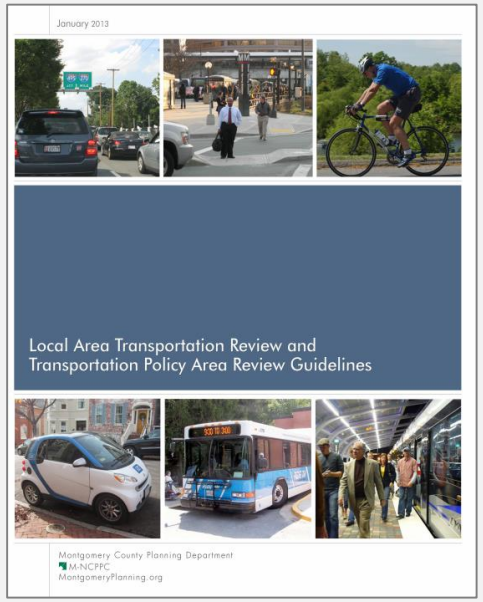
Current tool to measure school adequacy:

- **Annual School Test**

Subdivision Staging Policy
Results of School Test for FY 2016

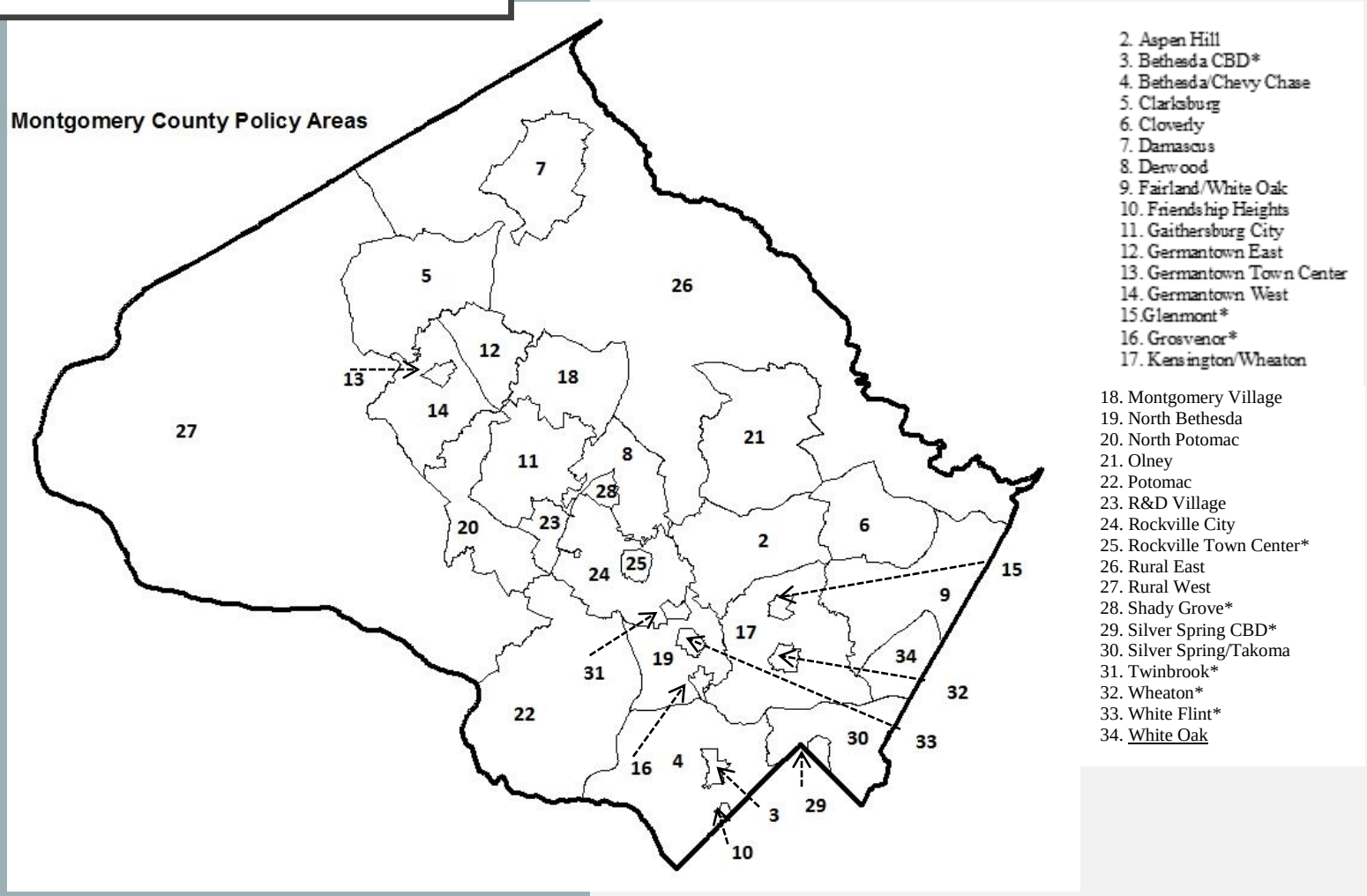
Reflects County Council Adopted FY 2016 Capital Budget and Amendments to the FY 2015–2020 Capital Improvements Program (CIP)
Effective July 1, 2015

School Test Level	Description	Cluster Outcomes by Level		
		Elementary Inadequate	Middle Inadequate	High Inadequate
Clusters over 105% utilization School facility payment required in inadequate clusters to proceed.	5-year test Effective July 1, 2015 Test year 2020-21	Clarksburg (113.8%) Gaithersburg (109.4%) Northwood (105.5%) Quince Orchard (115.3%)	Blair (117.1%) Damascus (109.3%) Gaithersburg (106.0%) Kennedy (115.6%) Northwood (119.6%) Rockville (109.6%) Wheaton (114.2%) Whitman (111.9%)	Blair (110.0%) Churchill (106.4%) Clarksburg (113.8%) Einstein (113.7%) Walter Johnson (119.8%) Kennedy (107.7%) Richard Montgomery (110.8%) Northwest (113.3%) Northwood (112.6%) Paint Branch (106.1%) Quince Orchard (108.7%) Wheaton (108.8%) Whitman (114.0%)
Clusters over 120% utilization ** Moratorium required in clusters that are inadequate.	5-year test Effective July 1, 2015 Test year 2020-21			



TRANSPORTATION

Transportation Policy Area Review (TPAR) is an area-wide test of adequacy.



2. Aspen Hill
3. Bethesda CBD*
4. Bethesda/Chevy Chase
5. Clarksburg
6. Cloverly
7. Damascus
8. Derwood
9. Fairland/White Oak
10. Friendship Heights
11. Gaithersburg City
12. Germantown East
13. Germantown Town Center
14. Germantown West
15. Glenmont*
16. Grosvenor*
17. Kensington/Wheaton
18. Montgomery Village
19. North Bethesda
20. North Potomac
21. Olney
22. Potomac
23. R&D Village
24. Rockville City
25. Rockville Town Center*
26. Rural East
27. Rural West
28. Shady Grove*
29. Silver Spring CBD*
30. Silver Spring/Takoma
31. Twinbrook*
32. Wheaton*
33. White Flint*
34. White Oak

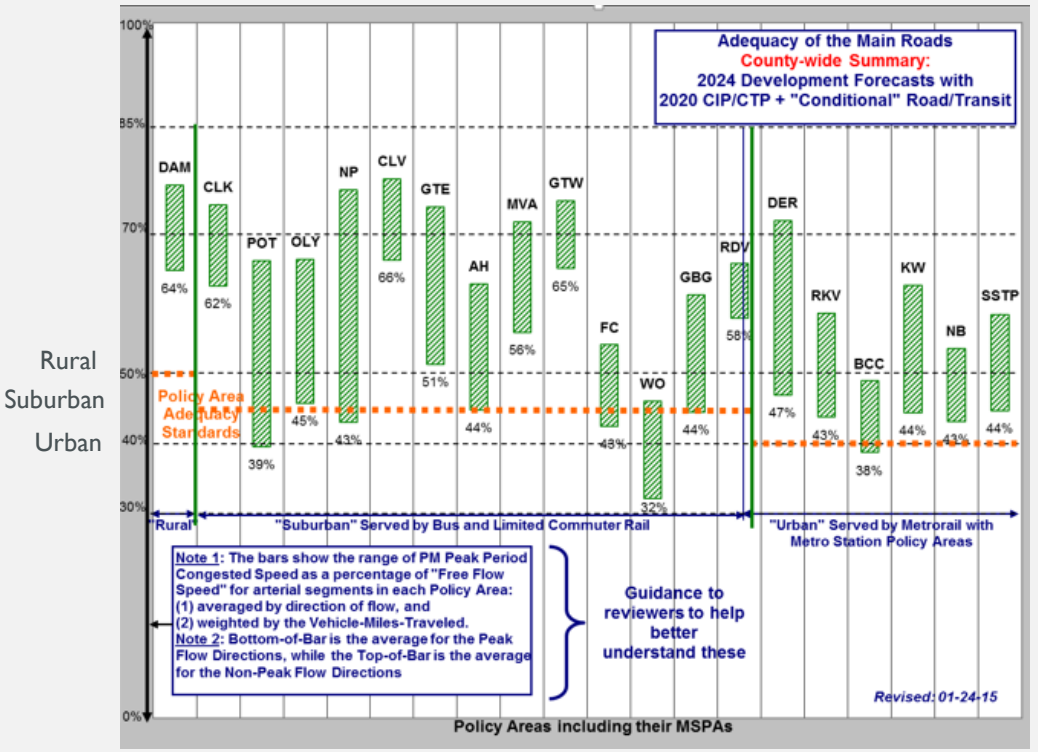
TRANSPORTATION

Roadway Adequacy:

Policy area average arterial roadway congestion cannot exceed specified standard.

Standard varies depending on transit availability and usage.

2014 TPAR Roadway Adequacy Test



Relative to the 2012 TPAR test:

- White Oak (WO) & Fairland/Colesville (FC) are reported as separate policy areas
- For most policy areas, results are generally similar Countywide
- Three additional policy areas deemed inadequate– North Potomac (NP), Aspen Hill (AH) & Bethesda Chevy Chase (BCC)

TRANSPORTATION

Transit Adequacy:

Focuses on the availability and quality of existing local transit service

Three metrics considered: coverage, peak headway, span of service

2014 TPAR Transit Adequacy Test

Transit Adequacy Standards			
	Minimum Coverage	Maximum Headway	Minimum Span
Urban	≥80 percent	≤14 minutes	≥17 hours
Suburban	≥70 percent	≤20 minutes	≥14 hours
Rural	>50 percent	≤60 minutes	≥4 hours

Coverage- How much of a policy area is within walking distance of transit?

Peak Headway – How frequently do buses arrive?

Span of Service – How many hours a day is transit service available?

If a policy area does not achieve adequacy for all three measures, that policy area is determined to be inadequate for transit.

TRANSPORTATION

Transportation Mitigation Payment

If projected transportation capacity in a policy area is inadequate, the Planning Board may approve a subdivision if the applicant commits to either:

- Fully mitigate the incremental traffic impact of the subdivision by adding capacity or implementing a trip reduction program; or
- Pay a Transportation Mitigation Payment as provided in County law.

TRANSPORTATION

Local Area Transportation Review (LATR)

- Tests capacity of nearby intersections.
- Applied to all projects generating 30 or more peak hour trips.
- If an intersection fails, developer can make improvements, mitigate trips or in limited cases – make a payment to the County.

NEW IDEAS

Direction from Council following the 2012 SSP:

Convert recently adopted version of the MWCOG regional transportation model to a more refined tool suitable for application in Montgomery County.

> Work underway with assistance from VHB, validating the model update now.

Update LATR trip generation rates to better reflect the traffic effects of mixed-use development and access to multi-modal travel options (last updated in 1989).

> Work underway with assistance from Renaisance.

Identify and assess alternative LATR metrics and procedures (Transportation Impact Study Technical Working Group).

> Formed the Transportation Impact Study Technical Working Group, putting together recommendations that will be brought to the Board early in 2016.

Refine the transit component of TPAR to reflect the travel implications of bus rapid transit.

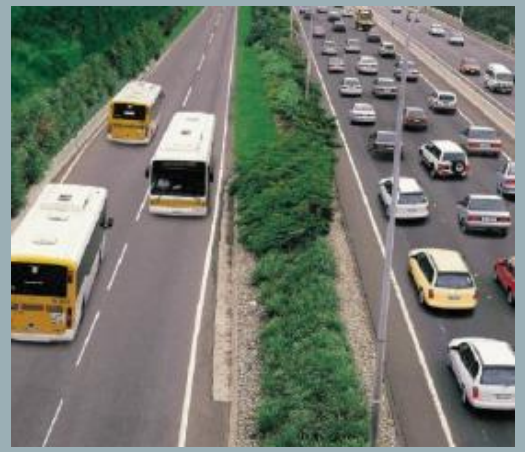
> Work underway with assistance from Renaisance.

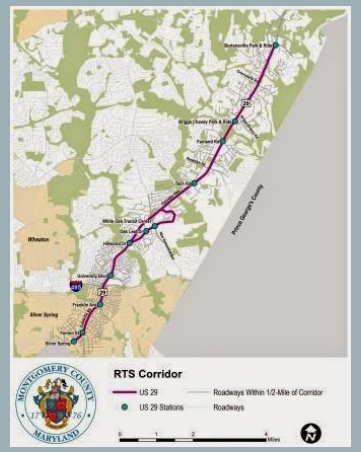
NEW IDEAS

Direction from the Board following briefing this past summer:

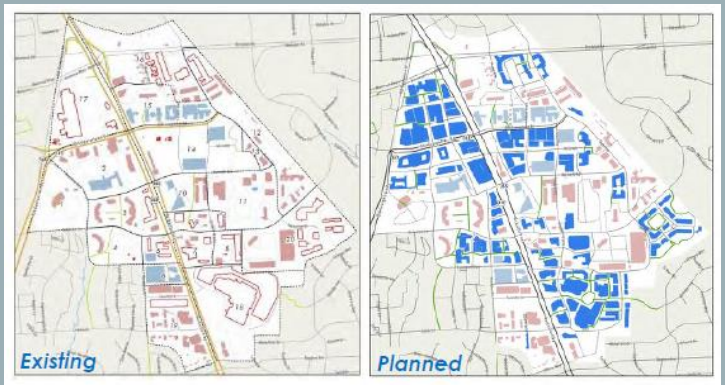
- Expand the pro-rata share concept beyond White Oak
- Look at incorporating Vehicle Miles of Travel (VMT) metric into the LATR process
- Consider consolidation of LATR and TPAR into a single transportation test
- Look at other methods/tools used for transportation demand modeling

  Work underway on these ideas with assistance from Fehr & Peers.





ISSUES/CONCERNS



Motivation for change:

Current transportation adequacy tests/rules may inhibit the ability to achieve master plan vision …

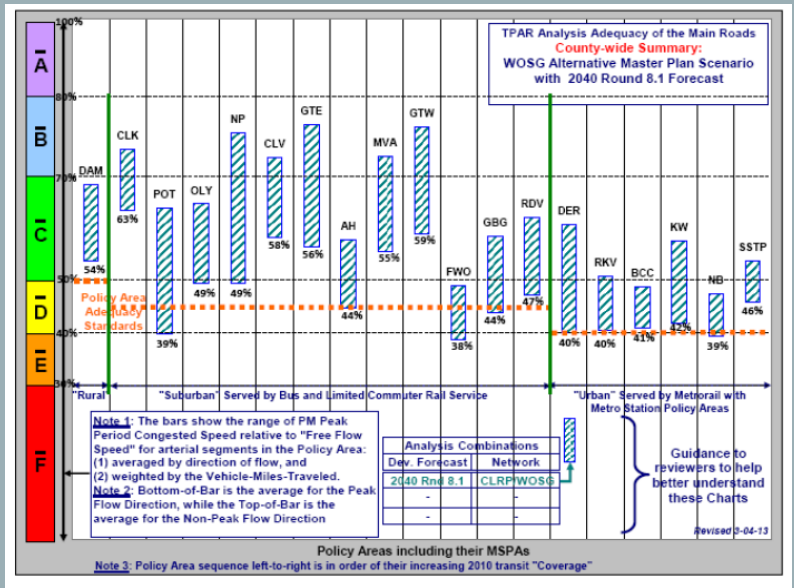
<u>Example: White Flint</u>

Sector Plan area is exempt from transportation tests/rules in favor of a pro-rata share special taxing district

Recent White Flint Traffic Impact Studies (TIS) illustrate the limitations of current measures of adequacy.

- Stantec Study (SHA/MCDOT) – "Conventional" approach using CLV and HCM showed results exceeding performance thresholds in many study area locations.
- STV Study (WF Partnership) – "Micro-simulation" approach using more "robust" traffic assignment assumptions and delay-based system performance metrics showed results achieving adequate system performance.

ISSUES/CONCERNS



Example: White Oak

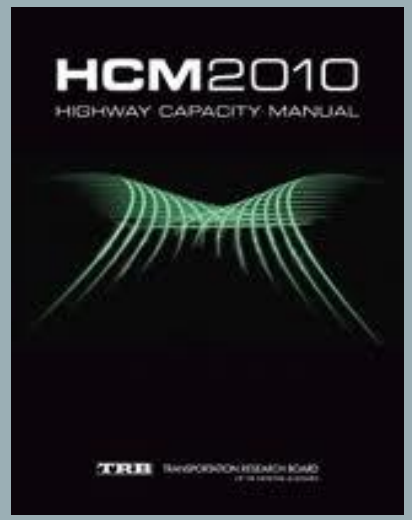
TPAR "external traffic" Problem

- Largely due to traffic from neighboring jurisdictions, the White Oak Science Gateway Master Plan could not achieve area-wide "land use/transportation balance".

LATR "free-rider" Problem

- Only those applicants whose development results in traffic that exceeds the LATR threshold pays for mitigation improvements. Applicants approved earlier in the process (whose estimated traffic is counted) do not pay.
- Major impetus for the evolving pro-rata share process in White Oak

ISSUES/CONCERNS



Concerns with focusing on Critical Lane Volume (CLV) …

- "Sketch level" tool with only one measure of performance (i.e., CLV)
- Does not address queuing
- Calculation tends to "breakdown" as intersections approach saturated traffic conditions (i.e., CLV>1600)
- May overestimate the need for physical improvements

Response to date …

- *LATR/TPAR Guidelines* now require *Highway Capacity Manual* (HCM) application for congested intersections (i.e., CLV>1600)
- HCM is a more "robust" process supporting operational and multi-modal solutions
- HCM allows for detailed assessment of intersection and approach including:
  - Level of Service
  - Delay
  - Volume-to-Capacity Ratio
  - Queues
  - Flow Rates
  - Also has measures of performance for pedestrians, bicycles & transit

2016 STAFF RECOMMENDATIONS INFLUENCED BY

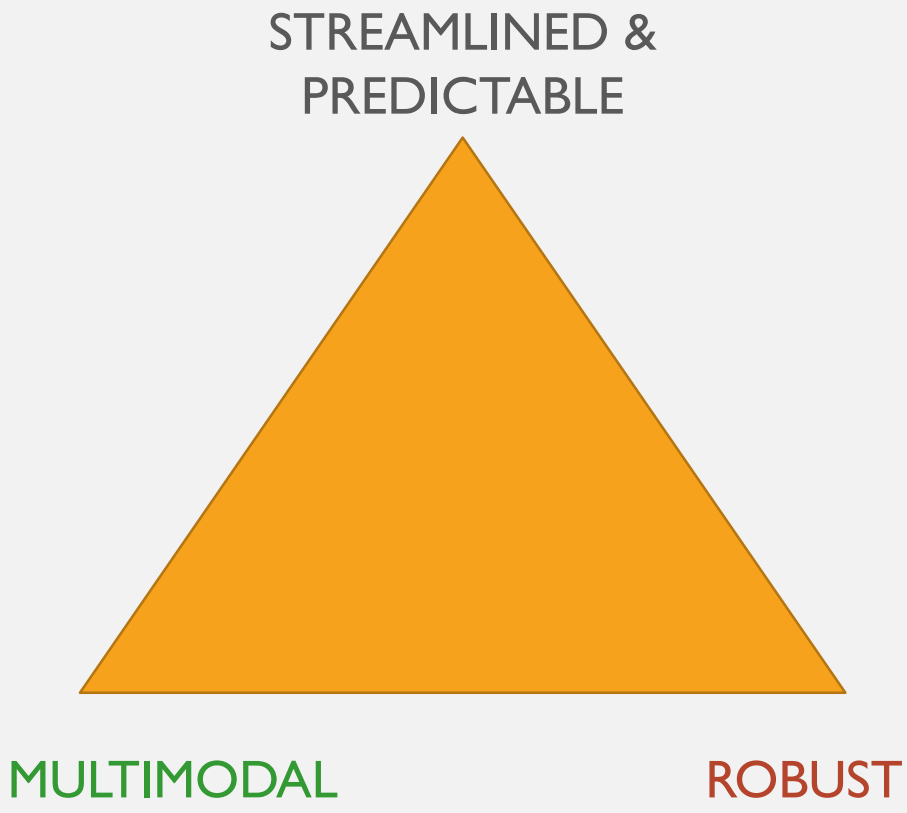
- Literature review
- Speakers series
- TISTWG
- Public meetings
- Planning Board guidance

OBJECTIVES FOR LATR CHANGES

Streamlined & predictable

Less auto-centric, more multimodal

More robust technical analysis (delays, not CLV)



SUMMARY OF PROPOSED LATR CHANGES: SCOPING

Element	Current	Proposed	Streamlined & Predictable	Multimodal	Robust
Change peak hour trip thresholds from vehicles to persons	30 vehicle trips	75 person trips in Metro areas 50 person trips elsewhere		X	
Shift private sector studies to public sector monitoring in core areas	30 vehicle trips	Private sector studies replaced by transportation impact tax payment and biennial public sector monitoring with Comprehensive Local Area Transportation Review	X	X	X
Introduce quantitative non-motorized and transit impact studies	N/A	50 transit trips, 100 pedestrian trips		X	X

SUMMARY OF PROPOSED LATR CHANGES: ANALYSIS

Element	Current	Proposed	Streamlined & Predictable	Multimodal	Robust
Reduce reliance on CLVs	CLV up to 1600, then intersection vehicle delay	CLV up to 1600 or congested arterial per MWCOG, then network delay			X
Maintain pedestrian crossing time	Check individual crosswalk crossing time	Maintain total pedestrian wait and walk time in urban road code areas		X	X
Offsite ped issue resolution for pedestrian sites	N/A	Fix or fund all ADA solutions within 500' of sites with > 100 peak hour peds		X	X
Public sector implementation in complex areas	Payment in lieu of construction as last resort	Payment in lieu for urban road code areas	X		

SUMMARY OF PROPOSED AREAWIDE TEST CHANGES

Element	Current	Proposed	Streamlined & Predictable	Multimodal	Robust
Replace Policy Area Review with transit accessibility	10-year assessment of average roadway LOS and average bus route coverage, headway, and span	Proportional improvement in access to jobs (2025 as a proportion of 2040)		X	
Incorporate VMT into transportation impact tax rates	Impact tax rates based on vehicle trip generation	Impact tax rates based on vehicle-miles of travel	X		X

COUNTYWIDE OBJECTIVES

Streamlined & predictable

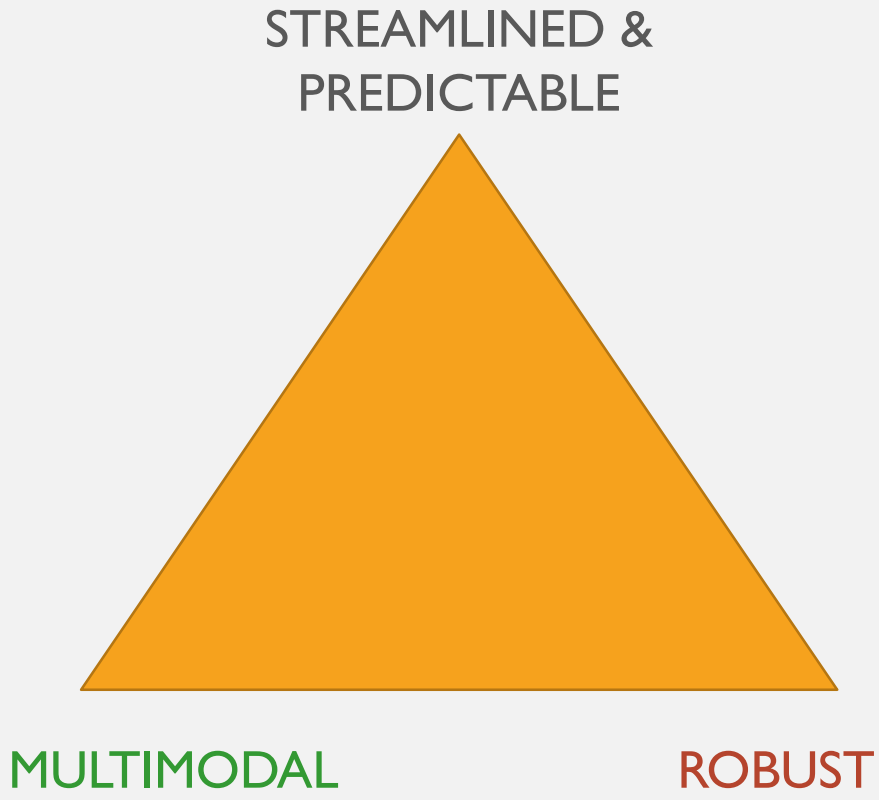
- LATR streamlined to allow payment in lieu implementing mitigation
- Fewer studies – core area payment in lieu, new tripgen rates, and person-trip thresholds

Less auto-centric, more multimodal

- Accessibility as a policy area measure of adequacy considering sensitivity to BRT performance

More robust technical analysis

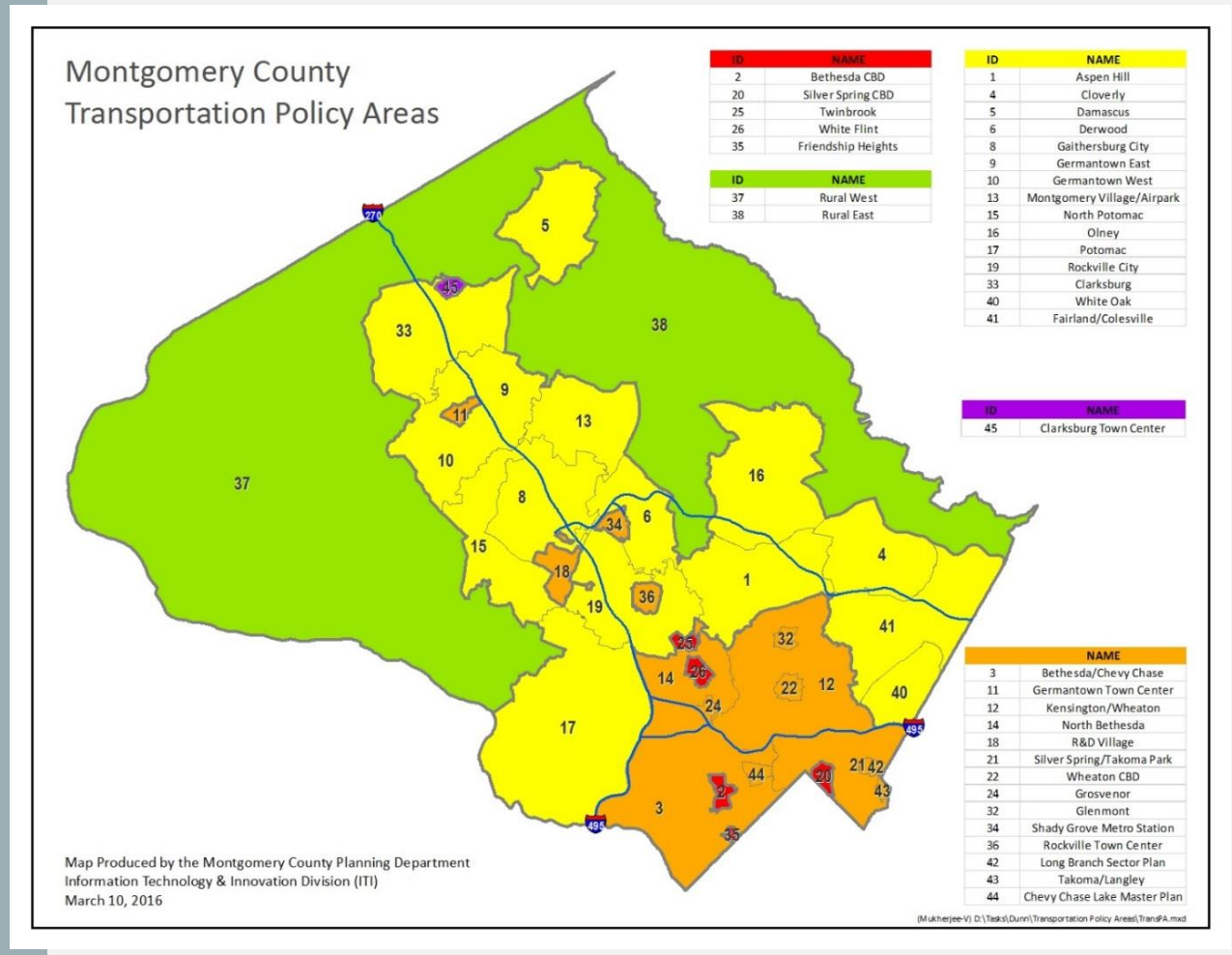
- Greater reliance on operations rather than CLV
- VMT and NADMS as tools for non-regulatory policy area monitoring and study inputs; case-specific monitoring for regulatory review if applicant requests



NEW POLICY AREA IDEAS

February 18 discussion on policy area groups:

- Core
- Corridor
- Residential
- Rural



NEW POLICY AREA IDEAS

What matters where?

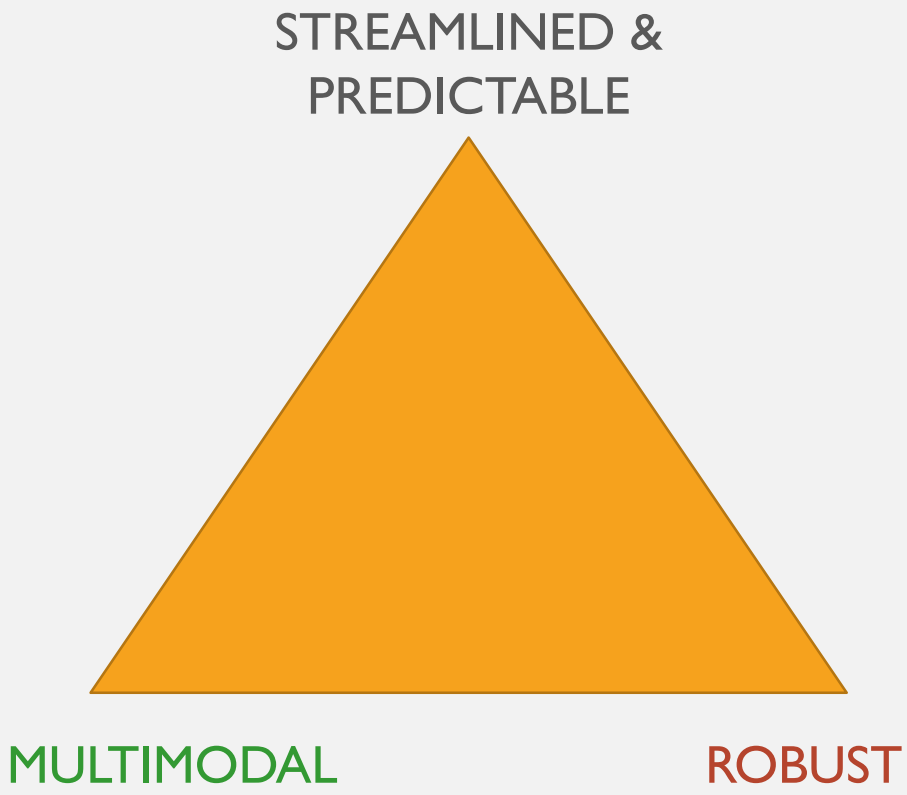
Core

Corridor

Residential

Rural

Challenge: The importance of attaining all three objectives is highest in core areas and lowest in rural areas. For core areas, proposal is to streamline private sector participation and conduct robust and multimodal public sector monitoring.



POLICY AREA MEASURE

Options:

- Transit Accessibility
- NADMS
- VMT

Considerations:

- Sensibility
- Ability to forecast
- Relevance to master plan implementation

Examination

How does each option compare across:

- Locations (policy areas)
- Timeframes (current/future)
- Adding Transit Facilities (test sensitivity to presence or absence of Purple Line and Corridor Cities Transitway in 2040 forecasts)

COORDINATION OF APFO AND POLICY TOOLS

Policy Tools:

- Areawide test
- LATR
- Mitigation payments and impact taxes

Considerations:

- "Adequacy"
- Efficient resource allocation
- Relevance to master plan implementation

Where have we been (prior to 3/18)?

- Defined context by categorizing policy areas
- Considered policy objectives
- Discussed areawide measures/metrics
- Established conceptual framework based on a new areawide test

Where are we now?

- Forecasting metrics – how sensitive are the proposed areawide metrics to change over time? How sensitive are they to LRT/BRT?

Where are we headed?

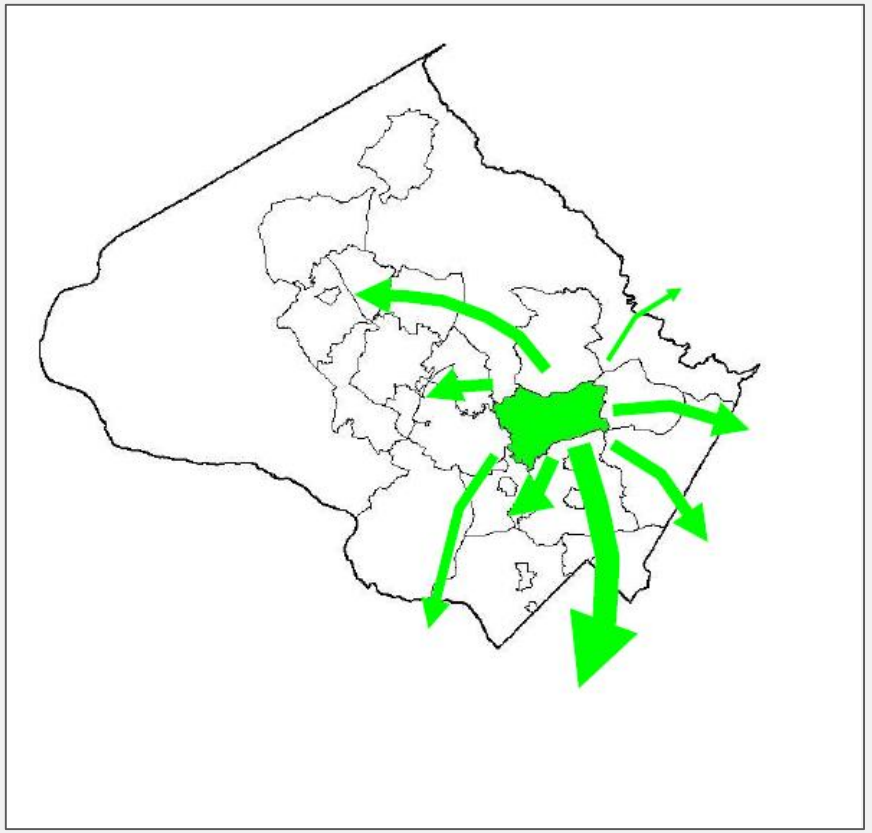
- Select areawide metric(s)
- Define adequacy
- Consider reasonable areawide payments (local + areawide + impact tax)

METRICS DEFINITION

Accessibility to Jobs Within 45 Minutes

Number of regional jobs available within 45 minutes by walk-access transit from households in each Policy Area

Travel/4 model TAZ data aggregated to Policy Area totals

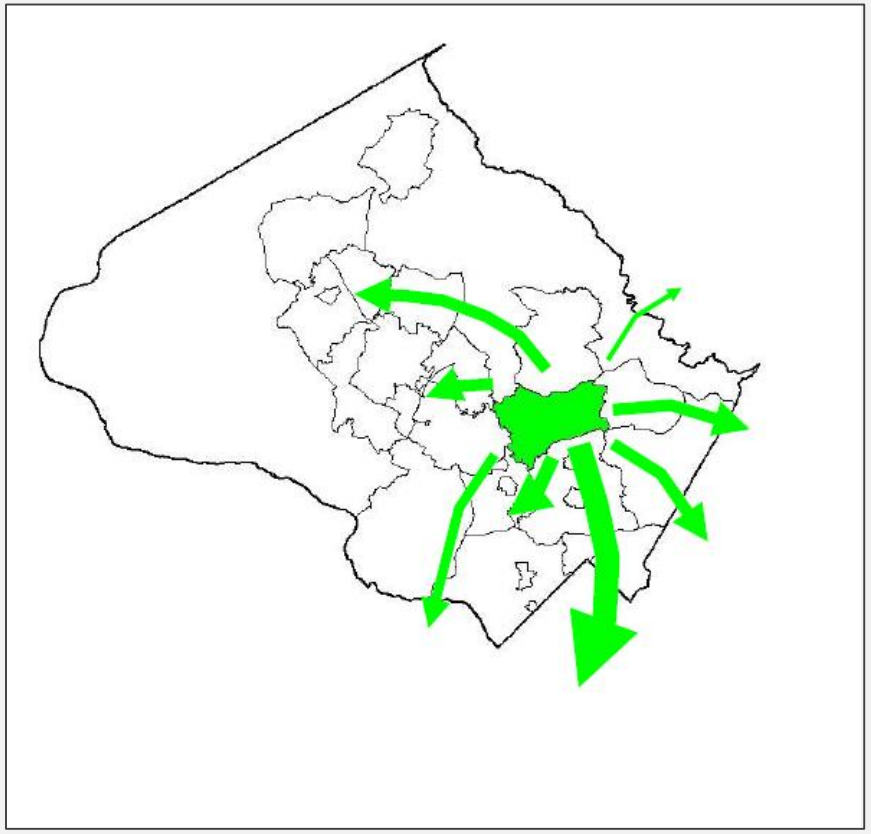


METRICS DEFINITION

Non-Auto Driver Mode Share (NADMS)

Percentage of trips to work by walk, bike, transit, auto passenger from households in each Policy Area

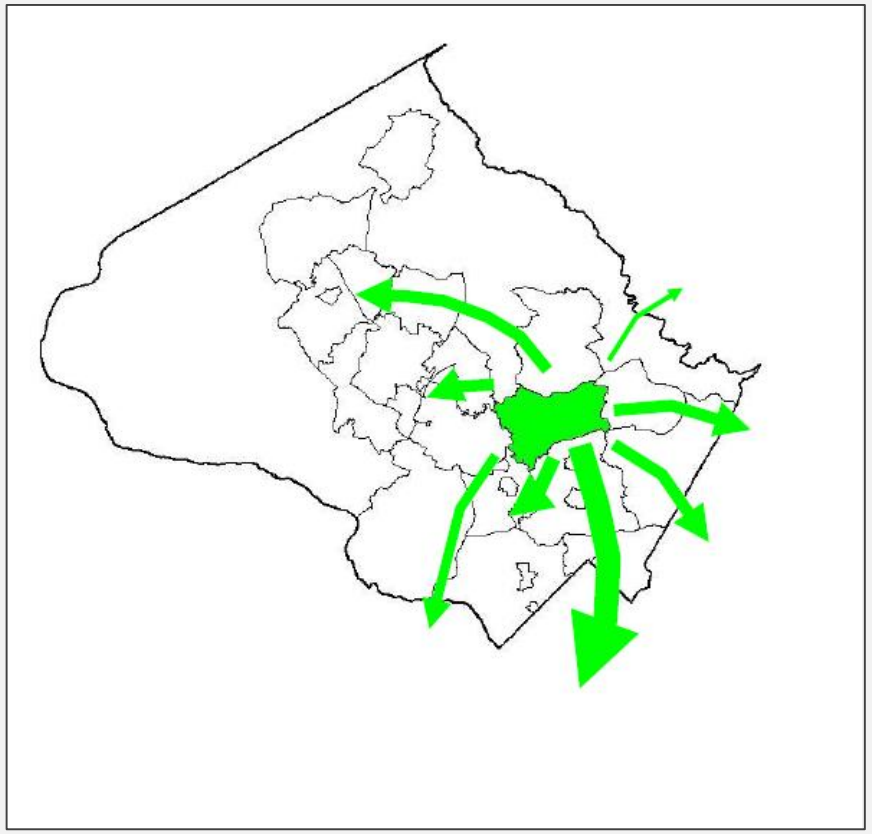
Travel/4 model TAZ data aggregated to Policy Area totals



METRICS DEFINITION

Vehicle Miles of Travel (VMT)

- Average trip length by auto drivers from households within each Policy Area
- Travel/4 model TAZ data aggregated to Policy Area totals

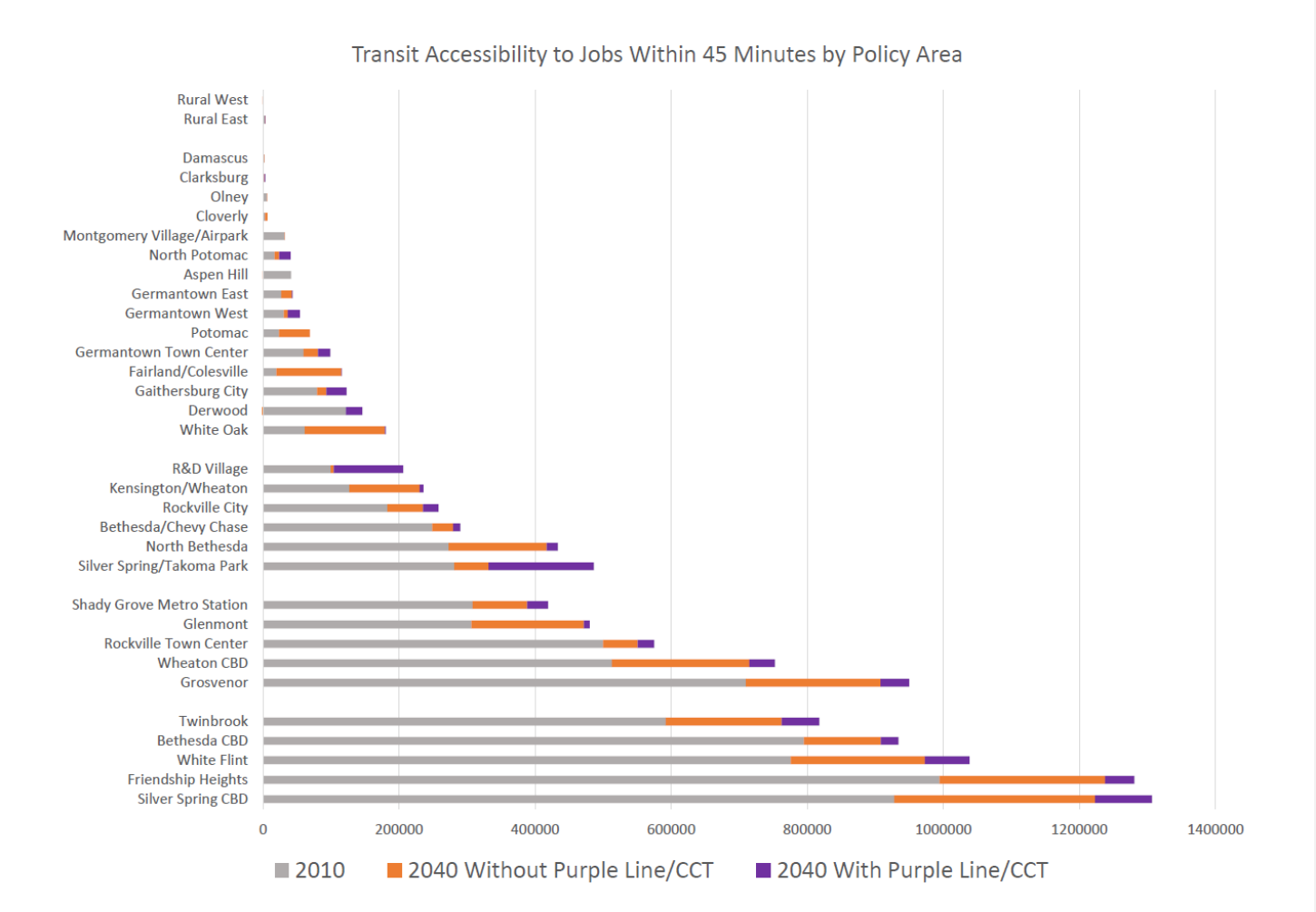


TRANSIT ACCESSIBILITY

Sensible: Logically and highly responsive to both land use and transportation changes

Ability to forecast: Related to model inputs rather than outputs (not subject to latent demand)

Relevant: Measures progress towards transit system implementation



NADMS

Less sensible: Mildly responsive to land use and transportation changes

Lower ability to forecast: Travel/4 model "lumpiness" in CBDs, latent demand concerns

Less relevant: Only measures progress towards plan implementation/adequacy where NADMS specified by policy

		NADMS (Productions)				NADMS (Attractions)			
Policy Area	Name	2010	2040 Without PL/CCT	2040 With PL/CCT	Effect of PL/CCT	2010	2040 No PL/CCT	2040 Base	Effect of PL/CCT
1	Aspen Hill	32.09%	35.26%	35.28%	0.02%	14.59%	16.75%	16.81%	0.06%
2	Bethesda CBD	58.73%	64.04%	64.38%	0.34%	46.77%	54.98%	55.47%	0.49%
3	Bethesda/Chevy Chase	42.18%	40.15%	40.33%	0.17%	34.73%	42.68%	42.85%	0.17%
4	Cloverly	26.16%	27.92%	27.98%	0.07%	9.01%	10.46%	10.50%	0.03%
5	Damascus	21.61%	27.83%	27.81%	-0.02%	7.86%	8.43%	8.45%	0.02%
6	Derwood	30.55%	33.48%	34.26%	0.78%	16.64%	20.33%	20.71%	0.38%
8	Gaithersburg City	32.56%	38.34%	39.40%	1.07%	17.50%	21.59%	22.53%	0.94%
9	Germantown East	27.55%	32.20%	32.83%	0.63%	14.06%	17.70%	18.29%	0.59%
10	Germantown West	28.07%	32.48%	33.55%	1.06%	14.01%	17.65%	18.79%	1.15%
11	Germantown Town Center	32.89%	38.68%	39.95%	1.27%	16.62%	20.77%	21.50%	0.73%
12	Kensington/Wheaton	40.88%	45.78%	45.83%	0.05%	19.49%	24.22%	24.36%	0.14%
13	Montgomery Village/Airpark	29.76%	33.42%	33.79%	0.37%	13.85%	15.45%	15.59%	0.13%
14	North Bethesda	41.36%	45.08%	45.18%	0.10%	22.27%	29.81%	29.93%	0.12%
15	North Potomac	23.19%	26.22%	27.66%	1.44%	9.81%	12.30%	12.91%	0.61%
16	Olney	25.77%	27.71%	27.80%	0.09%	9.82%	10.95%	10.98%	0.03%
17	Potomac	26.28%	26.93%	27.08%	0.15%	13.83%	18.94%	19.05%	0.11%
18	R&D Village	32.47%	37.28%	40.63%	3.35%	18.20%	23.65%	26.43%	2.78%
19	Rockville City	35.54%	38.38%	39.43%	1.05%	18.04%	23.58%	25.17%	1.59%
20	Silver Spring CBD	61.34%	68.19%	68.57%	0.38%	50.20%	56.41%	56.89%	0.48%
21	Silver Spring/Takoma Park	49.74%	57.14%	57.15%	0.00%	33.71%	41.47%	41.93%	0.46%
22	Wheaton CBD	51.82%	57.26%	57.30%	0.04%	26.28%	31.81%	31.95%	0.14%
24	Grosvenor	50.49%	55.77%	55.98%	0.21%	24.49%	30.34%	30.50%	0.16%
25	Twinbrook	45.35%	56.63%	56.88%	0.25%	28.42%	34.50%	34.63%	0.13%
26	White Flint	49.55%	53.86%	54.04%	0.18%	28.86%	35.48%	35.61%	0.13%
32	Glenmont	46.63%	50.75%	50.76%	0.01%	23.77%	28.55%	28.60%	0.05%
33	Clarksburg	22.07%	27.49%	28.24%	0.75%	7.30%	11.38%	11.48%	0.09%
34	Shady Grove Metro Station	39.35%	48.15%	51.02%	2.88%	21.25%	24.62%	25.25%	0.63%
35	Friendship Heights	64.27%	66.00%	66.05%	0.05%	48.83%	57.51%	57.56%	0.05%
36	Rockville Town Center	44.95%	50.10%	50.29%	0.19%	26.42%	31.76%	31.87%	0.11%
37	Rural West	18.99%	21.33%	21.88%	0.54%	7.56%	10.57%	10.69%	0.12%
38	Rural East	22.95%	26.57%	26.77%	0.20%	8.70%	10.29%	10.33%	0.03%
40	White Oak	40.03%	46.71%	46.86%	0.14%	15.58%	21.28%	21.43%	0.15%
41	Fairland/Colesville	29.87%	35.24%	35.39%	0.15%	13.42%	18.70%	18.82%	0.11%
99	County	35.98%	39.88%	40.37%	0.48%	25.19%	30.91%	31.53%	0.62%

VMT

Less sensible: Site-level monitoring an option but reduces applicant predictability

Lower ability to forecast: Travel/4 model "lumpiness" in CBDs, latent demand concerns

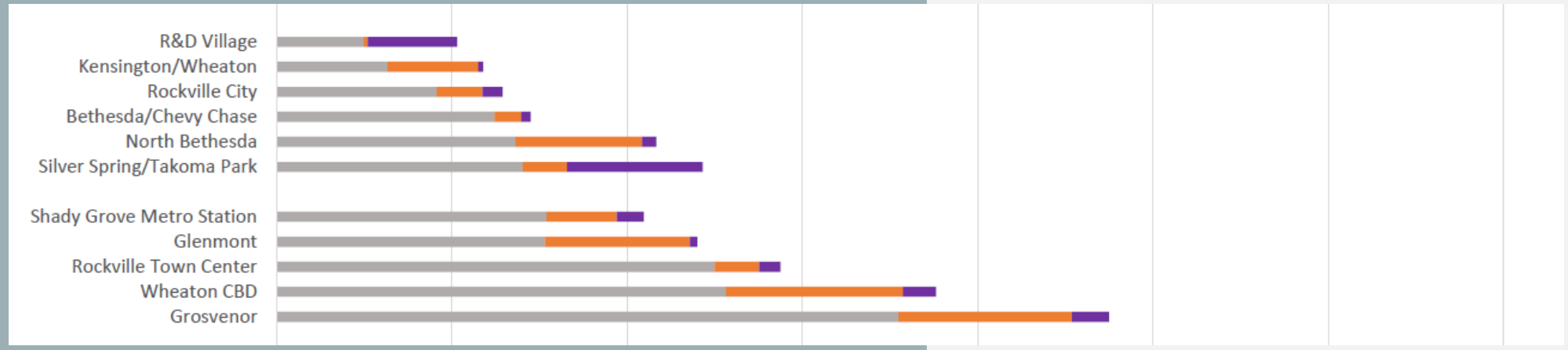
Mixed relevance: Related to congestion concerns, part of national interest led by California's SB 743, but not related to master plan implementation/adequacy

Preliminary VMT results

Policy Area	Name	2010	2040 Without Purple Line/CCT	2040 With Purple Line/CCT	Effect of Purple Line/CCT
3	**Bethesda/Chevy Chase**	24.4	25.7	25.8	0.1
35	Friendship Heights	18.1	9.2	9.3	0.0
2	Bethesda CBD	19.7	8.3	8.3	0.0
21	**Silver Spring/Takoma Park**	24.5	15.2	15.1	0.0
20	Silver Spring CBD	20.6	7.0	6.9	0.0
12	**Kensington/Wheaton**	27.0	21.5	21.5	0.0
22	Wheaton CBD	24.4	12.5	12.4	0.0
32	Glenmont	25.9	19.6	19.6	0.0
14	**North Bethesda**	25.3	20.9	21.0	0.0
24	Grosvenor	23.9	14.4	14.3	0.0
26	White Flint	22.1	10.1	10.1	0.0
25	Twinbrook	20.5	9.9	9.9	0.0
19	**Rockville City**	25.9	20.7	20.6	0.0
36	Rockville Town Center	23.5	13.7	13.7	0.0
6	**Derwood**	27.4	29.9	30.1	0.2
34	Shady Grove Metro Station	23.6	16.3	16.1	-0.1
10	**Germantown West**	35.6	33.9	33.7	-0.2
11	Germantown Town Center	32.8	24.3	24.1	-0.2
1	Aspen Hill	29.4	22.3	22.4	0.1
4	Cloverly	36.3	38.7	38.7	0.0
5	Damascus	47.1	49.9	50.0	0.1
8	Gaithersburg City	28.5	25.5	25.5	-0.1
9	Germantown East	33.2	33.1	33.0	0.0
13	Montgomery Village/Airpark	30.9	30.3	30.4	0.1
15	North Potomac	31.2	39.2	38.8	-0.4
16	Olney	36.6	40.6	41.2	0.5
17	Potomac	30.5	39.6	39.6	0.0
18	R&D Village	28.3	21.0	20.6	-0.4
33	Clarksburg	40.6	44.4	44.6	0.1
37	Rural West	47.5	59.8	59.8	0.0
38	Rural East	47.3	50.8	51.0	0.2
40	White Oak	28.1	19.1	19.0	-0.1
41	Fairland/Colesville	32.9	26.7	26.6	0.0
99	**Total**	**29.6**	**25.9**	**25.9**	0.0

EMPLOYING A NEW POLICY AREA METRIC

- Need to define adequacy
  - Organize by policy area groupings (like Corridor areas below)
  - Set threshold based on accessibility goal (do we expect R&D Village to achieve the same accessibility as Wheaton CBD?)
  - Compare current accessibility to forecast accessibility (in 10 years to forecast accessibility in 2040)
- Establish relationship to impact tax



COMBINING POLICY AREA AND LOCAL AREA EVALUATION CONCEPTS

	Core	Corridor	Residential – Streets	Residential – Roads	Rural
New policy area test	Monitoring	Applies	Applies	Applies	Does not apply
LATR using mode-specific trip generation with multimodal intersection delay or CLV	Monitoring	Applies multimodal intersection delay	Applies multimodal intersection delay	Applies CLV	Applies CLV
Development required to:	Pay impact tax	Provide local area study, check policy area adequacy, make mitigation payment, if applicable, and pay impact tax	Provide local area study, check policy area adequacy, make mitigation payment, if applicable, and pay impact tax	Provide local area study, check policy area adequacy, mitigate, if applicable, and pay impact tax	Provide local area study, mitigate, if applicable, and pay impact tax

Note: Option to exempt residential applicants with minimal on-site parking based on VMT reduction remains applicable in Core areas to reduce or eliminate payment.

NEXT STEPS

- April 14 Planning Board guidance
- Early May Working Draft
- Early June Public Hearing
- June Planning Board Worksessions
- Late July Transmittal to Council
- Fall Council Worksessions
- Novmember 15 Council Adoption