LATR and TPAR Study Status Update
Planning Board Roundtable
12/3/15
Today’s discussion

• Study overview

• Four specific topics:
  1. Function and relationship of transportation funding mechanisms (LATR, TPAR, transportation impact taxes)
  2. Pro-rata share concept consideration for Downtown Bethesda Plan
  3. TPAR refinement Update
  4. Trip generation study update

• Next steps and schedule
Initial Subdivision Staging Policy Work Program

<table>
<thead>
<tr>
<th>Element</th>
<th>LATR</th>
<th>TPAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>Full consideration of options (similar to 2012)</td>
<td>More robust transit performance calculations</td>
</tr>
<tr>
<td>Working group</td>
<td>~30-member TISTWG (monthly meetings)</td>
<td>Technical staff</td>
</tr>
<tr>
<td>Timeframe</td>
<td>Initial recommendations fall 2015 followed by Planning Board and Council review through fall 2016</td>
<td></td>
</tr>
</tbody>
</table>

Coordinated with
- PHED/Council consideration of SSP Amendment #14-02 for White Oak
- Development of new trip generation rates
- Exploration of new forecasting measures and tools
• Explore opportunities to combine LATR / TPAR / tax requirements
• Consider new approaches and tools such as accessibility and VMT
• Incorporate parking as a trip generation indicator
• Three primary LATR objectives
  • Improve multimodal analysis,
  • Increase predictability,
  • Streamline implementation

• Synergy between LATR, TPAR, and impact taxes

• Multiple land use contexts
Pro-rata share

- Where do we know what we want to build (both public and private)?
- Apply special districts

Negotiated Exaction

- Where do we want to emphasize ped, bike, transit?
- Apply equivalent mitigation approaches

Impact Mitigation

- Where do we want to achieve L/QOS standards (for any or all modes)?
- Apply modal tests
Today, White Flint is the only pro-rata share district and many CBDs/MSPAs have a negotiated exaction approach.

- White Oak pro-rata share district is underway.
- Over time, both currently defined policy areas and future areas like some BRT stations may change to reflect local needs.
1. Transportation funding mechanisms
The overarching objectives of the full suite of LATR, TPAR, and impact tax programs is to:

- Ensure master planned public facilities are being implemented in a timely manner consistent with master planned economic growth
- Have new development contribute a fair share of the planned public facilities

Approach has fiscal, legal, and societal equity perspectives (i.e., many constituents want to see tangible public facility or service benefits associated with welcoming new neighbors)
Boundaries aren’t this clear (often on purpose)
Legal processes (SSP and Section 52 of Code) are different
Policies are designed to credit overlaps (and often do)
If the blobs were made proportional to capital funding they’d probably look somewhat closer to this....
A small portion of the County’s Capital Improvement Program is funded by development fees. This reflects:

- The fact that many capital projects are life-cycle replacements
- County policy that private and public sectors should partner in implementing master planned projects

Source: 2012-2016 Subdivision Staging Policy Appendix 3
The last transportation impact tax calculations date to 2009

Table 3.1. Derivation of Recommended Transportation Impact Tax Rates

<table>
<thead>
<tr>
<th></th>
<th>Single-family residential</th>
<th>Multi-family residential</th>
<th>Office</th>
<th>Retail</th>
<th>Industrial</th>
<th>Other commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Forecast growth, 2005-2030</td>
<td>26,645 DU</td>
<td>67,655 DU</td>
<td>119,533 jobs</td>
<td>18,232 jobs</td>
<td>12,208 jobs</td>
<td>20,027 jobs</td>
</tr>
<tr>
<td>B. Square footage of commercial space</td>
<td>29,883,250</td>
<td>7,292,800</td>
<td>5,493,600</td>
<td>10,013,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Vehicle trip generation rates</td>
<td>9.57 per DU</td>
<td>6.72 per DU</td>
<td>3.30 per job</td>
<td>21.47 per KGSF³</td>
<td>2.77 per job</td>
<td>2.77 per job</td>
</tr>
<tr>
<td>D. Daily vehicle trip ends by land use type</td>
<td>254,993</td>
<td>454,642</td>
<td>394,459</td>
<td>156,577</td>
<td>33,816</td>
<td>55,475</td>
</tr>
<tr>
<td>E. Percentage of total daily vehicle trip ends</td>
<td>18.9%</td>
<td>33.7%</td>
<td>29.2%</td>
<td>11.6%</td>
<td>2.5%</td>
<td>4.1%</td>
</tr>
<tr>
<td>F. Proportional allocation of $1,182M estimated local capital cost for facility expansion, 2005-2030</td>
<td>$223M</td>
<td>$398M</td>
<td>$345M</td>
<td>$137M</td>
<td>$30M</td>
<td>$49M</td>
</tr>
<tr>
<td>G. Resultant unit impact tax rates</td>
<td>$8,380 per DU</td>
<td>$5,884 per DU</td>
<td>$11.56 per GSF</td>
<td>$18.80 per GSF</td>
<td>$5.39 per GSF</td>
<td>$4.85 per GSF</td>
</tr>
</tbody>
</table>

Source: 2007-2009 Growth Policy Infrastructure Financing Chapter
The same analysis led to the $11,000 / peak hour vehicle trip value (since adjusted for inflation) used in LATR.
Opportunities for combining LATR/TPAR/impact tax other than in new pro-rata share districts:

- Consideration of policy objectives – what to incent:
  - Development types?
  - Geographic location?
  - Development size?
- Contemplation of broad policy adjustments: might certain MSPAs replace LATR/TPAR/taxes with a non pro-rata (defined contribution rather than defined benefit) ad valorem tax?
- Coordination on SSP and Section 52 amendment proposals
- Collaboration with other constituents
2. Bethesda pro-rata share concepts
private sector funding for total system supply

**PRO RATA SHARE** = \[ \frac{\text{unit of development demand}}{\text{pro rata share}} \]

Simple, powerful, flexible concept.

Requires fairly extensive context-sensitive development:
- What functional objectives should the system achieve (i.e., how to define supply and demand)?
- Geographic area?
- Type/timeframe of improvements?
- Interim monitoring / measurement?

Once established, private-sector participation is streamlined.
Successful pro-rata share district elements:

• Compact geographic area
• Common stakeholder interests
• Inventory of unbuilt transportation system and private development
• Reflects needs and interests of constituents
• Coordinated with state, regional, and local implementers and operators
• Includes regular monitoring and revision processes and schedules

Examples: Delaware TID, Florida MMTDs, special districts in Baltimore, MD and Portland, OR.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>White Flint</th>
<th>White Oak</th>
<th>Bethesda?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funded by</td>
<td>Special taxing district</td>
<td>LATR fee in lieu</td>
<td>TBD</td>
</tr>
<tr>
<td>Applies to</td>
<td>All commercial properties</td>
<td>New development</td>
<td>New development?</td>
</tr>
<tr>
<td>Funding for</td>
<td>Agreed upon set of multimodal projects</td>
<td>Intersection improvements TBD</td>
<td>Bikesharing? Streetscaping?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Buffered bike lanes?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>One-way streets?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Purple Line?</td>
</tr>
<tr>
<td>Calculation basis</td>
<td>Capital cost of projects</td>
<td>Capital cost of projects</td>
<td>Capital cost of projects?</td>
</tr>
<tr>
<td>Payment basis</td>
<td>Annual ad-valorem tax</td>
<td>One-time vehicle trip generation fee</td>
<td>One-time person trip generation fee</td>
</tr>
<tr>
<td>Replaces</td>
<td>LATR, TPAR, and impact tax</td>
<td>LATR</td>
<td>LATR, TPAR and impact tax?</td>
</tr>
<tr>
<td>Includes transit facilities?</td>
<td>Yes, as negotiated</td>
<td>No</td>
<td>BRT?</td>
</tr>
<tr>
<td>Includes operations?</td>
<td>No</td>
<td>No</td>
<td>TMD/parking? Transit?</td>
</tr>
<tr>
<td>Extends beyond plan area?</td>
<td>No</td>
<td>TBD</td>
<td>355 North?</td>
</tr>
<tr>
<td>Interim monitoring?</td>
<td>Staging plan, TMD biennial reports, mode shares</td>
<td>TMD biennial reports, other?</td>
<td>TMD biennial reports, other?</td>
</tr>
<tr>
<td>Costs updated?</td>
<td>Never?</td>
<td>TBD</td>
<td>Every 4 years?</td>
</tr>
</tbody>
</table>
3. TPAR transit test refinement
Current transit measures of effectiveness are coverage, headway, and span of service for a 10-year forecast period.

Development in areas found inadequate (in yellow) pay a Transportation Mitigation Payment defined as a proportion of the transportation impact tax.

Benefit: links directly to County transit service policies.

Limitation: does not reflect benefit of moving transit vehicles faster, which is a primary benefit of master planned BRT and LRT facilities on exclusive right-of-way.
Two new measures of transit system adequacy under review.
- Both compare transit and auto performance relative to each other
- Both are viewed as an addition to the TPAR definition of adequacy, not a replacement for the current definitions
- Option 1 (Mobility): How much County transit riders can bypass traffic delays
- Option 2 (Accessibility): How many regional jobs are available to County residents by transit or by car?
TPAR Option 1: Mobility

- Considers Person Miles of Travel (PMT) by auto and by transit
- Focuses on non-regional, surface facilities (excludes Metrorail and MARC as well as freeways)
- Examination of transit Quality of Service is one of several metrics under consideration
TPAR Option 2: Accessibility

- Considers Multimodal Accessibility (MMA)
- Auto and transit accessibility to regional jobs, considering decay-weighted value of travel time by each mode.
- Relationship between auto and transit accessibility (Transit/Auto Ratio, or TAR) can be converted to a transit Quality of Service letter grade:

\[
\text{ACCESSIBILITY} = \frac{\text{Land Use}}{\text{Transportation Network}}
\]

**Opportunities:**
- Number
- Variety
- Proximity

**Travel Time:**
- Connectivity
- Directness
- Safety
TPAR Option 2: Accessibility

- Considers Multimodal Accessibility (MMA)
- Auto and transit accessibility to regional jobs, considering decay-weighted value of travel time by each mode.
- Relationship between auto and transit accessibility (Transit/Auto Ratio, or TAR) can be converted to a transit Quality of Service letter grade:
Step 1. Access to jobs via auto by TAZ:
Step 2. Access to jobs via transit by TAZ:
Step 3. Ratio by TAZ:
Transit / auto
Step 4. Policy Area population weighted average
4. Trip generation
Current LATR trip generation rates:

- For vehicles only
- Reflect proximity to Metrorail for office buildings only
- Reflect “unique” urban environments in Bethesda, Friendship Heights, and Silver Spring CBDs
- Based on outdated local observations for common land uses
- Can be replaced with ITE Trip Generation data, which is also vehicles only, suburban, and sometimes dated
- May result in over-designed roadways and unwarranted exaction of development
National trends include movement toward mode-specific and context sensitive trip generation rates:

- ITE Trip Generation Handbook “thinking” in person trips
- Jurisdiction-specific guides and studies such as New York City and Washington, DC
- Data collection techniques that entail intercept surveys in addition to counts
- Trip generation estimation tools modules that reflect local environment based on national database relationships for D’s (density, diversity, design, etc.)
Mode-specific trip generation rates will support mode-specific LATR analysis requirements. Fewer applications will conduct any type of study; only the largest applications will conduct quantitative ped or transit studies.
Analytic approach

- Based on Transportation Research Board guidance (NCHRP 758)
- Utilizes TRAVEL/4 model relationships to develop context-sensitive mode shares by policy area and land use type (LATR Guidelines lookup table)
- Applies post-processing approach to apply additional mode shift factors for proximity to fixed-guideway transit stations and unbundled parking

Trip generation update
Policy Area specific vehicle trip generation rate adjustments

- Based on identifying mode splits by land use type by trip purpose type
- Reflects reduction from basic ITE rate (assumed applied to Rural West policy area)
- Results in adjustment factor lookup table as indicated at left

### Basic lookup table in LATR

Guidelines for baseline vehicle trip reduction from ITE rates

<table>
<thead>
<tr>
<th>ITE Vehicle Trip Reduction Factors</th>
<th>Residential</th>
<th>Office</th>
<th>Retail</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Aspen Hill</td>
<td>97%</td>
<td>98%</td>
<td>99%</td>
<td>97%</td>
</tr>
<tr>
<td>2 Bethesda CBD</td>
<td>79%</td>
<td>63%</td>
<td>61%</td>
<td>62%</td>
</tr>
<tr>
<td>3 Bethesda/Chevy Chase</td>
<td>87%</td>
<td>81%</td>
<td>85%</td>
<td>79%</td>
</tr>
<tr>
<td>4 Cloverly</td>
<td>99%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>5 Damascus</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>6 Derwood</td>
<td>94%</td>
<td>94%</td>
<td>87%</td>
<td>94%</td>
</tr>
<tr>
<td>8 Gaithersburg City</td>
<td>88%</td>
<td>86%</td>
<td>74%</td>
<td>85%</td>
</tr>
<tr>
<td>9 Germantown East</td>
<td>95%</td>
<td>90%</td>
<td>95%</td>
<td>91%</td>
</tr>
<tr>
<td>10 Germantown West</td>
<td>93%</td>
<td>87%</td>
<td>92%</td>
<td>88%</td>
</tr>
<tr>
<td>11 Germantown Town Center</td>
<td>85%</td>
<td>89%</td>
<td>77%</td>
<td>88%</td>
</tr>
<tr>
<td>12 Kensington/Wheaton</td>
<td>91%</td>
<td>92%</td>
<td>96%</td>
<td>92%</td>
</tr>
<tr>
<td>13 Montgomery Village/Airpark</td>
<td>93%</td>
<td>100%</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>14 North Bethesda</td>
<td>83%</td>
<td>87%</td>
<td>71%</td>
<td>82%</td>
</tr>
<tr>
<td>15 North Potomac</td>
<td>97%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>16 Olney</td>
<td>99%</td>
<td>100%</td>
<td>99%</td>
<td>100%</td>
</tr>
<tr>
<td>17 Potomac</td>
<td>97%</td>
<td>98%</td>
<td>96%</td>
<td>98%</td>
</tr>
<tr>
<td>18 R&amp;D Village</td>
<td>89%</td>
<td>88%</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td>19 Rockville City</td>
<td>88%</td>
<td>94%</td>
<td>87%</td>
<td>98%</td>
</tr>
<tr>
<td>20 Silver Spring CBD</td>
<td>77%</td>
<td>65%</td>
<td>58%</td>
<td>65%</td>
</tr>
<tr>
<td>21 Silver Spring/Takoma Park</td>
<td>83%</td>
<td>83%</td>
<td>82%</td>
<td>84%</td>
</tr>
<tr>
<td>22 Wheaton CBD</td>
<td>85%</td>
<td>85%</td>
<td>76%</td>
<td>84%</td>
</tr>
<tr>
<td>24 Grosvenor</td>
<td>81%</td>
<td>84%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>25 Twinbrook</td>
<td>81%</td>
<td>80%</td>
<td>74%</td>
<td>79%</td>
</tr>
<tr>
<td>26 White Flint</td>
<td>79%</td>
<td>78%</td>
<td>72%</td>
<td>78%</td>
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<tr>
<td>32 Glenmont</td>
<td>90%</td>
<td>91%</td>
<td>96%</td>
<td>91%</td>
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<tr>
<td>33 Clarksburg</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>34 Shady Grove Metro Station</td>
<td>89%</td>
<td>88%</td>
<td>77%</td>
<td>88%</td>
</tr>
<tr>
<td>35 Friendship Heights</td>
<td>78%</td>
<td>70%</td>
<td>73%</td>
<td>70%</td>
</tr>
<tr>
<td>36 Rockville Town Center</td>
<td>79%</td>
<td>80%</td>
<td>70%</td>
<td>79%</td>
</tr>
<tr>
<td>37 Rural West</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>38 Rural East</td>
<td>99%</td>
<td>99%</td>
<td>98%</td>
<td>100%</td>
</tr>
<tr>
<td>40 White Oak</td>
<td>89%</td>
<td>90%</td>
<td>91%</td>
<td>88%</td>
</tr>
<tr>
<td>41 Fairland/Colesville</td>
<td>96%</td>
<td>96%</td>
<td>99%</td>
<td>97%</td>
</tr>
</tbody>
</table>
Transit proximity factor

- Pivots from basic trip adjustment factor as starting point
- Allows individual site to compare proximity to Metrorail/MARC against policy area average

Shift in transit mode from WMATA survey data to be applied in selected policy areas. For instance, in CBDs, would need walking distance within ~1,000 of Metrorail feet to get further discount based on pivoting from MWCOG model rates.
Parking management factor
- Pivots from basic trip adjustment factor as starting point
- Allows individual site to reduce vehicle trip rates based on parking reduction
- Would apply in areas where land use densities suggests parking management may be effective at changing mode share
- May be limited to areas with Transportation Management Districts to aid with management and monitoring
- Not applicable in Parking Lot Districts
**Next steps**

**LATR**
- Develop draft changes to LATR Guidelines (summer 2015)
- Review / refine with TISTWG (fall 2015)
- Develop final recommendations/report (winter 2015)
- Present to Planning Board (early 2016)*

**TPAR**
- Assess changes (summer 2015)
- Review/refine with partner agency staff (fall 2015)
- Develop final recommendations/report (winter 2015)
- Present to Planning Board (early 2016)*

**Trip Generation**
- Develop/refine approach (summer 2015)
- Review/refine with partner agency staff (fall 2015)
- Develop final recommendations/report (winter 2015)
- Present to Planning Board (early 2016)*

* - additional status roundtable discussions to be held in 2015